

CHAPTER 4.

STATISTICS OF MANUFACTURES FOR THE STATE, CITIES, AND INDUSTRIES.

Introduction.—This chapter gives the statistics of manufactures for the state of Illinois for the calendar year 1909 as shown by the Thirteenth Census.

The text summarizes the general results of the census inquiry, presenting a series of special tables in which the main facts printed in the general tables are given in convenient form for the state as a whole and for important industries. It also presents tables in which the statistics for the industries of the state as a whole and for a few important industries are classified by character of ownership, size of establishments, number of wage earners, and prevailing hours of labor, information which could not be presented in general tables for each industry without disclosing the facts for individual establishments.

At the end of the chapter are three general tables.

Table I gives for 1909, 1904, and 1899 the number of establishments and of persons engaged in the industries, primary power, capital, salaries and wages, cost of materials, value of products, and value added by manufacture reported for all industries combined and for certain important industries (1) for the state as a whole and (2) for the cities of Chicago, East St. Louis, Peoria, and Springfield. It also gives the same items for all industries combined for every incorporated place having in 1910 a population of over 10,000 but less than 50,000.

Table II gives statistics in detail for 1909 for the state and for a larger number of industries.

Table III gives statistics in detail for 1909 for Chicago, East St. Louis, Peoria, and Springfield for all industries combined and selected industries, and for each city having from 10,000 to 50,000 inhabitants for all industries combined.

Scope of census: Factory industries.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of organization, location of establishments, size of establishments, labor force, and similar subjects. When use is made of the data for these purposes it is imperative that due attention should be given to the limitations of the figures. Particularly is this true when the attempt is made to derive from them figures purporting to show average wages, cost of production, or profits. These limitations will be fully discussed in the general report on manufactures for the United States as a whole.

The census of 1909, like that of 1904, was confined to manufacturing establishments conducted under the factory system, as

distinguished from the neighborhood, hand, and building industries. Where statistics for 1899 are given they have been reduced to a comparable basis by eliminating the latter class of industries. The census does not include establishments which were idle during the entire year, or had a value of products of less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions, or in governmental establishments, except those of the Federal Government.

Period covered.—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—The term "establishment" comprises the factories, mills, or plants which are under a common ownership or control, and for which one set of books of account is kept.

If, however, the plants constituting an establishment as thus defined were not all located within the same city or state, separate reports were secured, in order that the separate totals might be included in the statistics for each city or state. In some instances separate reports were secured for different industries carried on in the same establishment.

Classification by industries.—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products very different from those covered by the class designation, and, on the other hand, may not include the total product covered by this designation, because some part of this product may be made in establishments in which it is not the product of chief value.

Selected industries.—The general tables at the end of this chapter give the principal facts separately for the industries of the state. A selection has been made of the leading industries of the state for more detailed consideration. Sometimes an industry of greater importance than some of those selected is omitted because it comprises so few establishments that these detailed presentations would reveal the operations of individual concerns.

Comparisons with previous censuses.—Owing to the changes in industrial conditions, it is not always possible to classify establishments by industries in such a way as to permit accurate comparison with preceding censuses. Table I, giving comparable figures for 1909, 1904, and 1899, therefore, does not embrace all the industries shown for 1909 in Table II.

Influence of increased prices.—In considering changes in cost of materials, value of products, and value added by manufacture, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures can not be taken as an exact measure of increase in the volume of business.

Persons engaged in industry.—At the censuses of 1909, 1904, and 1899, the following general classes of persons engaged in manufacturing industries have been distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks, and (5) wage earners. In the censuses of 1904 and 1899 these five classes were shown according to the three main groups: (1) Proprietors and firm members, (2) salaried officials

clerks, etc., and (3) wage earners. The second group included the three classes of salaried officers of corporations, superintendents and managers, and clerks. In the present census an entirely different grouping is employed: That into (1) proprietors and officials, (2) clerks, and (3) wage earners. The first group includes proprietors and firm members, salaried officers of corporations, and superintendents and managers.

At this census the number of persons engaged in the industries, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for December 15, or the nearest representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where conditions were exceptional, and particularly in the case of certain seasonal industries, such as canning, the December date could not be accepted as typical and an earlier date had to be chosen.

In the case of employees other than wage earners the number thus reported on December 15, or other representative day, has been treated as equivalent to the average for the year, since the number of employees of this class does not vary much from month to month in a given industry. In the case of wage earners the average is obtained in the manner explained in the next paragraph.

Wage earners.—In addition to the report by sex and age of the number of wage earners on December 15, or other representative day, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported each month by 12. The average thus obtained represents the number of wage earners that would be required to perform the work done if all were constantly employed during the entire year. Accordingly, the importance of any industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given for each separate industry, is not totaled for all industries combined, because in view of the variations of date such a total is believed not to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries, as compared with industries in continual operation.

In particular, totals by sex and age for the wage earners reported for the representative day would be misleading because of the undue weight given to seasonal industries, in some of which, such as canning and preserving, the distribution of the wage earners by sex and age is materially different from that in most industries of more regular operation. In order to determine as nearly as possible the sex and age distribution of the average number of wage earners in the state as a whole, the following procedure has been adopted:

The percentage distribution by sex and age of the wage earners in each industry for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. This percentage has been applied to the average number of wage earners for the year in that industry, to determine the average number of men, women, and children employed. These calculated averages for the several industries have been added up to give the average distribution for the state as a whole.

In 1899 and 1904 the schedule called for the average number of wage earners of each sex 16 years and over, and the total number under 16 years of age, for each month, and these monthly statements were combined in an annual average. Comparatively few manufacturing concerns, however, keep their books in such a way as to show readily the number of men, women, and children (under 16) employed each month. These monthly returns by sex and age were, in fact, largely estimates. It was believed that a more accurate and reliable sex and age distribution could be secured by taking as a basis of estimate the actual numbers employed on a single day.

Prevailing hours of labor.—The census made no attempt to ascertain the number of employees working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one period to another are disregarded, and no attention is given to the fact that a limited number of employees may have hours differing from those of the majority. In the tables all the wage earners of each establishment are counted in the class within which the establishment itself falls. In most establishments, however, all or practically all the employees work the same number of hours, so that these figures give a substantially correct picture of the hours of labor in manufacturing industries.

Capital.—For reasons stated in prior census reports, the statistics of capital secured by the census canvass are so defective as to be without value, except as indicating very general conditions. The instructions on the schedule for securing capital were as follows:

The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

Materials.—Cost of materials refers to the materials used during the year, which may be more or less than the materials purchased during the year. The term materials includes fuel, rent of power and heat, mill supplies, and containers, as well as materials forming a constituent part of the product. Fuel includes all fuel used, whether for heat, light, or power, or for the process of manufacture.

Expenses.—Under "Expenses" are included all items of expense incident to the year's business, except interest, whether on bonds or other forms of indebtedness, and allowances for depreciation.

Value of products.—The value of products for any industry includes the total value of all products manufactured in establishments whose products of chief value fall under the industry designation. The amounts given represent the selling value at the factory of all products manufactured during the year, which may differ from the value of the products sold. Amounts received for work on materials furnished by others are included.

Value added by manufacture.—The value of products is not a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing process carried on in the industry itself. Another part of it, and often by far the larger part, represents the value of the materials used, which have been produced by agriculture or mining or by other industrial establishments. For many purposes, therefore, the best measure of the importance of different classes of industry is the value created as the result of the manufacturing operations carried on within the industry. This value is obtained by deducting the cost of the materials consumed from the value of the product. The figure thus obtained is termed in the census reports "value added by manufacture."

There is a further statistical advantage which "value added" has over gross value of products. In combining the value of products for all industries the value of products produced by one establishment and used as materials in another is duplicated, and the total, therefore, gives a greatly exaggerated idea of the wealth created. No such duplication takes place in the total "value added by manufacture."

Cost of manufacture and profits.—Census data do not show the entire cost of manufacture, and consequently can not be used to show profits. No account has been taken of interest and depreciation. Even if the amount of profit could be determined by deducting the expenses from the value of the products, the rate of profit on the investment could not properly be calculated, because of the very defective character of the returns regarding capital.

Primary power.—The figures given for this item show the total of the primary power used by the establishments. They do not

cover the power developed by motors operated by such power, the inclusion of which would evidently result in duplication.

Location of establishments.—The Census Bureau has classified establishments by their location in cities or classes of cities. In interpreting these figures due consideration should be given to the fact that often establishments are located just outside the boundaries of cities, and are necessarily so classified, though locally they are looked upon as constituting a part of the manufacturing interests of the cities.

INDUSTRIES IN GENERAL.

General character of the state.—Illinois, with a gross area of 56,665 square miles, of which 622 represent water surface, ranks twenty-third in size among the states of the Union. Its population in 1910 was 5,638,591, as compared with 4,821,550 in 1900 and 3,826,352 in 1890. It ranked third among the 49 states and territories as regards population both in 1910 and in 1900. The density of population for the state in 1910 was 100.6 per square mile, the corresponding figures for 1900 and 1890 being 86.1 and 68.3, respectively. Sixty-one and seven-tenths per cent of the entire population of the state in 1910 resided in incorporated places having 2,500 inhabitants or over, as compared with 54.3 per cent in 1900.

There were 32 incorporated places in the state which had a population of over 10,000 in 1910. One of these, Chicago, had 2,185,283 inhabitants; 11 others had over 25,000 but less than 100,000; and the remaining 20 had between 10,000 and 25,000. A list of these places, with the population of each in 1910 and 1900, is given on page 712. These 32 places contained 52.3 per cent of the total population of the state and were credited in 1909 with 83.1 per cent of the total value of its manufactures. Apart from these places, only 9.3 per cent of the population resided in places of 2,500 inhabitants or over.

Illinois lies wholly within the great prairie region, and, with the exception of Louisiana and Delaware, is the most level state in the Union. On account of the situation of the state, many of the trunk lines both between the East and the West and between the North and the South enter or pass through it, and thus afford excellent transportation facilities. On June 30, 1909, there were 152 railroad companies having lines within the state, and nearly every county is traversed by one or more railroads, many of them trunk lines running into Chicago or St. Louis. The state has approximately 12,000 miles of main track of steam railroads¹—an average of over 21 miles for every 100 square miles of territory—and also over 2,700 miles of electric railroads. In addition to these ample railway facilities, the state has the advantages of cheap water transportation afforded by the Mississippi and its navigable tributaries, and by the Great Lakes.

Importance and growth of manufactures.—Illinois is the most important manufacturing state west of the

Laundries.—The census of 1909 was the first to include statistics of laundries. The reports are confined to establishments using mechanical power. The data are presented separately and are not included in the general total for manufacturing industries, in order to avoid interference with comparisons with prior censuses.

Custom sawmills and gristmills.—In order to make the statistics for 1909 comparable with those for 1904 the data for these mills have been excluded from all the tables presenting general statistics, and are given in a separate table at the end of this chapter.

Alleghenies. In 1849 an average of 11,559 wage earners, representing 1.4 per cent of the total population, were employed in manufactures, while in 1879 an average of 144,727 wage earners, or 4.7 per cent of the total, and in 1909 an average of 465,764 wage earners, or 8.3 per cent of the total population, were so engaged. The gross value of products per capita of the total population of the state increased from \$19.42 in 1849 to \$340.38 in 1909, and the proportion which the manufactures of the state represented of the total value of the products of manufacturing industries in the United States, from 1.6 per cent in 1849 to 9.3 per cent in 1909. In the value of its manufactures Illinois ranked fifteenth in 1849 and third in 1909.

The first table on the following page gives the most important figures relative to all classes of manufactures combined, for 1909, 1904, and 1899, together with the percentages of increase from census to census.

In 1909 the state of Illinois had 18,026 manufacturing establishments, which gave employment to an average of 561,044 persons during the year and paid out \$364,768,000 in salaries and wages. Of the persons employed, 465,764 were wage earners. These establishments turned out products to the value of \$1,919,277,000, in the manufacture of which materials costing \$1,160,927,000 were utilized. The value added by manufacture was thus \$758,350,000, which figure, as explained in the Introduction, best represents the net wealth created by manufacturing operations during the year.

The totals presented in the table do not include the statistics for an establishment operated by the Federal Government—the arsenal at Rock Island. In 1909 this plant employed an average of 1,698 wage earners, and the value of its products, which consisted of infantry, cavalry, and artillery equipment, was reported as \$3,114,338.

In general, the table brings out the fact that the manufacturing industries of Illinois as a whole developed more rapidly during the five-year period 1904–1909 than during the preceding five-year period, 1899–1904, the percentage of increase being greater for all items shown in the table except miscellaneous expenses. During the later five-year period the number of establishments increased 20.8 per cent and the average number of wage earners 22.8 per cent, while the value of products increased 36.1 per cent and the value added by manufacture 33 per cent. As

¹ Interstate Commerce Commission, Statistics of the Railways in the United States, 1909.

pointed out in the Introduction, it would be improper to infer that manufactures increased in volume to the full extent indicated by the figures representing

values, since the increase shown is certainly due, in part, to the increase that has taken place in the price of commodities.

	NUMBER OR AMOUNT.			PER CENT OF INCREASE.	
	1909	1904	1899	1904-1909	1899-1904
Number of establishments.....	18,026	14,921	14,374	20.8	3.8
Persons engaged in manufactures.....	561,044	447,947	(1)	25.2	
Proprietors and firm members.....	17,357	13,990	(1)	24.1	
Salaried employees.....	77,923	54,521	40,964	42.9	33.1
Wage earners (average number).....	465,764	379,436	332,871	22.8	14.0
Primary horsepower.....	1,013,071	741,555	559,347	36.6	32.6
Capital.....	\$1,548,171,000	\$975,845,000	\$732,830,000	58.6	33.2
Expenses.....	1,733,327,000	1,281,208,000	999,151,000	35.3	28.2
Services.....	364,768,000	268,965,000	199,653,000	35.6	34.7
Salaries.....	91,449,000	60,560,000	40,549,000	51.0	49.4
Wages.....	273,319,000	208,405,000	159,104,000	31.1	31.0
Materials.....	1,160,927,000	840,057,000	681,450,000	38.2	23.3
Miscellaneous.....	207,632,000	172,186,000	118,048,000	20.6	45.9
Value of products.....	1,919,277,000	1,410,342,000	1,120,868,000	36.1	25.8
Value added by manufacture (value of products less cost of materials).....	758,350,000	570,285,000	439,418,000	33.0	29.8

¹ Figures not available.

The relative importance and growth of the leading manufacturing industries of the state are shown in the following table.

It should be borne in mind, in considering this

table, that the value of products in some of the industries involves a certain amount of duplication due to the use of the products of one establishment in the industry as materials for other establishments.

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. ¹			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1909	1899-1904	1904-1909	1899-1904
All industries.....	18,026	465,764	100.0	\$1,919,277,000	100.0	\$758,350,000	100.0	36.1	25.8	33.0	25.8
Slaughtering and meat packing.....	109	26,705	5.7	389,595,000	20.3	45,619,000	6.0	22.4	10.2	21.3	-9.3
Foundry and machine-shop products.....	1,178	52,260	11.2	138,579,000	7.2	74,769,000	9.9	46.0	16.1	35.6	26.5
Clothing, men's, including shirts.....	715	30,152	7.8	89,473,000	4.7	44,245,000	5.8	57.0	43.6	52.7	42.7
Printing and publishing.....	2,608	28,644	6.1	87,247,000	4.5	62,567,000	8.3	40.1	43.8	38.2	40.9
Iron and steel, steel works and rolling mills.....	24	17,684	3.8	30,008,000	4.5	30,364,000	4.0	44.3	32.9	42.1	41.3
Agricultural implements.....	79	19,240	4.1	57,268,000	3.0	32,444,000	4.3	40.1	-8.6	57.0	-10.8
Liquors, distilled.....	9	750	0.2	55,200,000	2.9	45,991,000	6.1	2.0	41.6	-3.6	38.4
Flour-mill and gristmill products.....	461	2,464	0.5	51,111,000	2.7	5,521,000	0.7	28.1	30.6	11.3	36.4
Lumber and timber products.....	814	16,567	3.0	44,952,000	2.3	17,688,000	2.3	37.3	41.2	21.8	43.0
Iron and steel, blast furnaces.....	6	2,403	0.5	38,300,000	2.0	7,992,000	1.0	40.1	80.4	-11.2	141.6
Bread and other bakery products.....	2,099	8,611	1.8	36,118,000	1.9	14,512,000	1.9	38.1	64.7	22.3	54.4
Cars and general shop construction and repairs by steam-railroad companies.....	73	23,131	5.0	32,229,000	1.7	10,996,000	2.2	26.4	53.7	28.5	159.4
Liquors, malt.....	106	4,398	0.9	28,449,000	1.5	21,416,000	2.8	19.6	20.5	15.7	18.0
Furniture and refrigerators.....	267	13,575	2.9	27,900,000	1.5	15,399,000	2.0	24.6	43.3	21.0	45.1
Cars, steam-railroad, not including operations of railroad companies.....	28	10,945	2.3	27,001,000	1.4	11,065,000	1.5	-12.7	24.5	19.6	25.5
Electrical machinery, apparatus, and supplies.....	143	9,641	2.1	26,826,000	1.4	13,198,000	1.7	60.6	37.2	45.8	20.8
Copper, tin, and sheet-iron products.....	483	7,473	1.6	22,823,000	1.2	9,630,000	1.3	48.3	45.2	46.1	46.5
Tobacco manufactures.....	1,944	8,034	1.7	21,870,000	1.1	13,267,000	1.7	36.2	34.9	31.8	30.4
Gas, illuminating and heating.....	78	6,301	1.3	21,052,000	1.1	14,842,000	2.0	31.5	82.4	29.2	69.4
Paint and varnish.....	74	1,702	0.4	20,434,000	1.1	7,532,000	1.0	63.4	62.9	61.3	84.9
Soap.....	34	2,188	0.5	20,181,000	1.1	6,233,000	0.8	42.6	50.0	29.5	41.4
Coffee and spice, roasting and grinding.....	35	1,018	0.2	19,751,000	1.0	4,637,000	0.6	26.4	23.9	42.2	20.8
Musical instruments, pianos and organs and materials.....	68	8,777	1.9	19,176,000	1.0	10,534,000	1.4	43.9	63.4	32.9	64.0
Butter, cheese, and condensed milk.....	295	1,732	0.4	17,798,000	0.9	3,531,000	0.5	34.1	3.1	37.5	-4.2
Carrriages and wagons and materials.....	325	5,852	1.3	16,831,000	0.9	7,352,000	1.0	47.7	26.5	30.2	21.4
Boots and shoes, including cut stock and findings.....	53	5,792	1.2	16,755,000	0.9	5,886,000	0.8	67.7	-4.8	64.5	7.2
Clothing, women's.....	221	6,151	1.3	16,635,000	0.9	7,421,000	1.0	35.9	25.2	25.7	24.1
Leather, tanned, curried, and finished.....	29	3,401	0.6	14,912,000	0.8	2,781,000	0.4	38.6	37.1	7.6	28.3
Patent medicines and compounds and druggists' preparations.....	359	1,869	0.4	13,114,000	0.7	8,701,000	1.1	-1.5	103.6	-12.0	118.8
Confectionery.....	140	3,799	0.8	12,798,000	0.7	5,133,000	0.7	67.4	18.3	49.0	27.6
Stoves and furnaces, including gas and oil stoves.....	71	4,499	1.0	10,287,000	0.5	6,431,000	0.8	30.8		27.3	
Brick and tile.....	340	6,574	1.4	9,705,000	0.5	7,274,000	1.0	29.4	48.5	24.5	4.1
Smelting and refining, zinc.....	5	1,922	0.4	9,004,000	0.5	2,508,000	0.3	65.9	-7.8	64.4	4.1
Leather goods.....	168	2,949	0.6	8,948,000	0.5	3,813,000	0.5	33.3	29.0	16.3	25.6
Baking powders and yeast.....	24	657	0.1	7,632,000	0.4	4,371,000	0.6	68.1	35.7	58.7	33.8

¹ Percentages are based on figures in Table I; a minus sign (-) denotes decrease. Where the percentages are omitted, comparable figures can not be given.

INDUSTRY.	Number of establishments.	WAGE EARNERS.		VALUE OF PRODUCTS.		VALUE ADDED BY MANUFACTURE.		PER CENT OF INCREASE. ¹			
		Average number.	Per cent distribution.	Amount.	Per cent distribution.	Amount.	Per cent distribution.	Value of products.		Value added by manufacture.	
								1904-1909	1899-1904	1904-1909	1899-1904
Canning and preserving.....	118	2,383	0.5	\$7,620,000	0.4	\$2,807,000	0.4	8.2	20.1	2.9	29.0
Millinery and lace goods.....	103	3,323	0.7	7,282,000	0.4	3,485,000	0.5	47.2	135.3	36.5	140.7
Furnishing goods, men's.....	61	2,688	0.6	7,213,000	0.4	2,640,000	0.3	75.8	21.9	61.7	25.7
Automobiles, including bodies and parts.....	65	2,382	0.5	7,154,000	0.4	3,175,000	0.4	1,903.9	-52.3	1,195.9	-46.3
Clocks and watches, including cases and materials.....	19	5,665	1.2	7,045,000	0.4	5,357,000	0.7				
Brass and bronze products.....	79	1,688	0.4	6,842,000	0.4	2,694,000	0.4				
Marble and stone work.....	278	2,226	0.5	6,771,000	0.4	3,741,000	0.5	25.6	34.1	15.0	36.7
Cooperage and wooden goods, not elsewhere specified.....	80	2,388	0.5	6,611,000	0.3	2,132,000	0.3	-6.7	14.7	-7.5	0.7
Boxes, fancy and paper.....	61	4,085	0.9	6,350,000	0.3	3,338,000	0.4	72.3	23.2	66.7	30.2
Hosiery and knit goods.....	43	2,913	0.6	5,947,000	0.3	2,715,000	0.4	59.4	69.2	73.5	70.3
Gas and electric fixtures and lamps and reflectors.....	78	2,090	0.4	5,797,000	0.3	3,103,000	0.4	99.6	70.2	81.4	67.9
Grease and tallow.....	36	778	0.2	5,590,000	0.3	1,525,000	0.2	129.3	20.1	60.5	143.0
Glass.....	11	3,507	0.7	5,047,000	0.3	3,505,000	0.5	-10.2	98.3	-16.9	95.4
Paper and wood pulp.....	19	1,397	0.3	4,983,000	0.3	1,884,000	0.2	104.0	70.6	83.4	62.0
Chemicals.....	19	836	0.2	4,656,000	0.2	1,760,000	0.2	103.9	9.4	89.7	2.0
Pottery, terra-cotta, and fire-clay products.....	39	3,157	0.7	4,615,000	0.2	3,489,000	0.5	41.7	51.9	38.2	61.0
Babbitt metal and solder.....	19	183	(²)	4,146,000	0.2	772,000	0.1	65.8	64.4	32.2	125.5
Cement.....	6	1,395	0.3	4,088,000	0.2	2,469,000	0.3	247.0		243.9	
Smelting and refining, not from the ore.....	11	369	0.1	3,930,000	0.2	695,000	0.1	98.9	567.6	78.5	369.9
Paper goods, not elsewhere specified.....	46	1,317	0.3	3,779,000	0.2	1,782,000	0.2	131.6	58.1	100.9	121.8
Sewing machines, cases, and attachments.....	7	1,713	0.4	3,622,000	0.2	2,512,000	0.3				
Cars and general shop construction and repairs by street-railroad companies.....	30	2,240	0.5	3,451,000	0.2	1,644,000	0.2	201.9	2.4	126.8	24.1
Mattresses and spring beds.....	86	831	0.2	2,860,000	0.1	1,226,000	0.2	35.1	28.2	35.2	5.6
Jewelry.....	67	990	0.2	2,780,000	0.1	1,516,000	0.2	58.4	9.6	58.9	19.4
Cutlery and tools, not elsewhere specified.....	80	1,393	0.3	2,758,000	0.1	1,686,000	0.2	82.0		77.5	
Corsets.....	16	1,502	0.3	2,711,000	0.1	1,516,000	0.2	119.2	23.1	124.3	24.7
Photo-engraving.....	27	1,114	0.2	2,678,000	0.1	2,144,000	0.3	96.2	28.7	93.9	22.1
Gloves and mittens, leather.....	29	1,309	0.3	2,523,000	0.1	1,045,000	0.1	49.2	-31.9	24.6	-32.9
Brooms and brushes.....	119	820	0.2	2,430,000	0.1	1,041,000	0.1	44.0	16.1	27.1	10.4
Coffins, burial cases, and undertakers' goods.....	21	732	0.2	2,280,000	0.1	1,278,000	0.2	21.0	50.3	36.2	81.4
Belting and hose, leather.....	11	233	(²)	2,188,000	0.1	803,000	0.1	107.4	-22.5	83.3	-6.4
Cotton goods, including cotton small wares.....	5	1,319	0.3	2,111,000	0.1	1,009,000	0.1	244.4		217.3	
Surgical appliances and artificial limbs.....	29	536	0.1	2,099,000	0.1	1,178,000	0.2	107.8	92.4	96.7	68.7
Fur goods.....	63	319	0.1	1,929,000	0.1	858,000	0.1	34.7	-38.6	40.0	-42.7
Ice, manufactured.....	83	804	0.2	1,928,000	0.1	1,486,000	0.2	105.1	-5.1	114.4	-15.2
Bicycles, motorcycles, and parts.....	14	910	0.2	1,777,000	0.1	804,000	0.1	53.1	-87.0	24.1	-84.3
Artificial stone.....	366	785	0.2	1,488,000	0.1	911,000	0.1	841.8		767.6	
Explosives.....	8	290	0.1	1,469,000	0.1	534,000	0.1	106.3	145.5	78.0	165.5
Wall paper.....	5	290	0.1	1,367,000	0.1	665,000	0.1	25.0	105.6	55.4	64.0
Fancy articles, not elsewhere specified.....	44	444	0.1	1,320,000	0.1	746,000	0.1	-21.1	84.4	-26.6	110.4
Woolen, worsted, and felt goods, and wool hats.....	9	499	0.1	1,314,000	0.1	541,000	0.1				
Stereotyping and electrotyping.....	21	592	0.1	1,282,000	0.1	966,000	0.1	6.4	79.0	-1.0	68.6
Type founding and printing materials.....	19	438	0.1	1,248,000	0.1	873,000	0.1	6.8	-7.1	3.1	-5.6
Blackening and cleansing and polishing preparations.....	58	236	(²)	1,230,000	0.1	661,000	0.1	86.1	30.1	118.2	-3.2
Dairymen's, poultryers', and apiarists' supplies.....	29	323	0.1	1,181,000	0.1	606,000	0.1	4.4		6.3	
Mirrors.....	10	353	0.1	1,106,000	0.1	471,000	0.1	-21.4	56.4	-33.3	112.7
Hats and caps, other than felt, straw, and wool.....	38	463	0.1	1,046,000	0.1	567,000	0.1	1.9	7.9	15.5	3.8
Bags, other than paper.....	6	189	(¹)	965,000	0.1	280,000	0.1	19.3	47.9	67.7	-6.2
Models and patterns, not including paper patterns.....	81	426	0.1	889,000	(²)	686,000	0.1	64.9	43.7	50.1	49.3
Show cases.....	16	386	0.1	829,000	(²)	539,000	0.1	-2.2	34.4	10.2	47.3
Photographic apparatus and materials.....	13	284	0.1	740,000	(²)	422,000	0.1	-8.8	27.1	-19.5	18.0
Electroplating.....	43	375	0.1	697,000	(²)	471,000	0.1	64.0	34.1	56.5	15.3
Lime.....	16	511	0.1	688,000	(²)	514,000	0.1	-58.6		-58.8	
Buttons.....	28	548	0.1	676,000	(²)	439,000	0.1	169.3	3.7	143.9	2.3
Flags, banners, regalia, society badges, and emblems.....	24	293	0.1	676,000	(²)	363,000	(²)	20.1	84.1	12.7	116.1
Boxes, cigar.....	18	404	0.1	664,000	(²)	347,000	(²)	15.5	22.3	7.4	29.7
Pumps, not including steam pumps.....	14	282	0.1	659,000	(²)	331,000	(²)	9.3	168.0	-16.2	240.5
Musical instruments and materials, not specified.....	30	336	0.1	629,000	(²)	451,000	0.1	-6.7	31.1	-3.4	35.0
Shipbuilding, including boat building.....	23	413	0.1	584,000	(²)	385,000	0.1				
Scales and balances.....	13	248	(²)	574,000	(²)	329,000	(²)	88.2	-1.0	88.9	-5.5
All other industries.....	1,751	41,270	8.9	228,783,000	11.7	78,773,000	10.4				

¹ Percentages are based on figures in Table I; a minus sign (-) denotes decrease. Where the percentages are omitted, comparable figures can not be given.
² Less than one-tenth of 1 per cent.

The foregoing table gives separate statistics for 95 industries or industry groups for which products valued at more than \$500,000 were reported in 1909. These industries include 8 with products exceeding \$50,000,000 in value, 8 with products between \$25,000,000 and \$50,000,000 in value, and 15 with products between \$10,000,000 and \$25,000,000 in value, making an aggregate of 31 industries with

products in excess of \$10,000,000 in value. The other industries shown separately comprise 17 with products between \$5,000,000 and \$10,000,000 in value, 34 with products between \$1,000,000 and \$5,000,000 in value, and 13 with products between \$500,000 and \$1,000,000 in value.

In addition to the 95 industries presented separately in the foregoing table, there were 65 other industries

in the state which reported products in 1909 to the value of \$500,000 or over.¹ These industries comprised 4 with products exceeding \$10,000,000 in value, 6 with products between \$5,000,000 and \$10,000,000 in value, 40 with products between \$1,000,000 and \$5,000,000 in value, and 15 with products between \$500,000 and \$1,000,000 in value. These industries are included under the head of "All other industries" in the table, in some cases because the operations of individual establishments would be disclosed if they were shown separately; in others, because the returns do not properly present the true condition of the industry, as it is more or less interwoven with other industries; and in still others, because comparative statistics for 1904 and 1899 can not be presented without disclosing the operations of individual establishments, or on account of changes in classification. The 1909 statistics, however, for three of these industries—the manufacture of paper bags, cordage and twine and jute and linen goods, and signs and advertising novelties—are presented in Table II, page 740.

The most important industries listed in this table in which they are arranged in the order of the value of products, call for brief consideration.

Slaughtering and meat packing.—This classification includes wholesale slaughtering and meat-packing establishments and those engaged in the manufacture of sausage only, but not the operations of the numerous slaughterhouses killing for the retail trade, which, in the aggregate, slaughter a large number of animals. Illinois continues to hold first place in this industry, the value of the output in 1909, \$389,595,000, forming 28.4 per cent of the total for the industry in the United States and representing an increase of 22.4 per cent as compared with 1904. In 1904 the state's proportion of the total value of products for this industry was 34.5 per cent, and in 1899, 36.6 per cent. Measured by value of products this is by far the most important

¹ These industries are:

Awnings, tents, and sails.	Lead, bar, pipe, and sheet.
Bags, paper.	Looking-glass and picture frames.
Belt and hose, woven and rubber.	Malt.
Butter, reworking.	Mineral and soda waters.
Candles.	Moving pictures.
Cars, street-railroad, not including operations of railroad companies.	Oil, cottonseed, and cake.
Cash registers and calculating machines.	Oil, linseed.
Coke.	Oil, not elsewhere specified.
Cordage and twine and jute and linen goods.	Olecloth and linoleum.
Cordials and syrups.	Oleomargarine.
Fertilizers.	Optical goods.
Firearms and ammunition.	Petroleum, refining.
Flavoring extracts.	Roofing materials.
Food preparations.	Saws.
Glass, cutting, staining, and ornamenting.	Signs and advertising novelties.
Glucose and starch.	Silk and silk goods, including throwsters.
Glue.	Smelting and refining, lead.
Gold and silver, reducing and refining, not from the ore.	Soda-water apparatus.
Hair work.	Sporting and athletic goods.
House-furnishing goods, not elsewhere specified.	Springs, steel, car and carriage.
Ink, writing.	Stationery goods, not elsewhere specified.
Instruments, professional and scientific.	Statuary and art goods.
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.	Sugar and molasses.
Iron and steel, doors and shutters.	Sulphuric, nitric, and mixed acids.
Iron and steel forgings.	Tin plate and ternoplate.
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.	Toys and games.
Iron and steel pipe, wrought.	Typewriters and supplies.
Labels and tags.	Upholstering materials.
Lard, refined, not made in slaughtering and meat-packing establishments.	Vinegar and cider.
	Windmills.
	Window shades and fixtures.
	Wire.
	Wirework, including wire rope and cable.
	Wood preserving.
	Wood, turned and carved.
	Wool scouring.

industry in Illinois, contributing a little over one-fifth of the state total for all manufacturing industries in 1909. Although greatly exceeding any other industry in the state in value of products, the industry ranked only fourth in average number of wage earners and in value added by manufacture.

Foundry and machine-shop products.—This industry includes all foundries and machine shops and similar establishments except those which manufacture a distinctive product covered by some other classification, such as cash registers, sewing machines, and electrical machinery and apparatus. Establishments engaged in the manufacture of bells, cast-iron and cast-steel pipe, gas machines and gas and water meters, hardware, steam fittings and heating apparatus, and structural ironwork, some of which were classified separately at previous censuses, are all included under this general heading. This industry ranks second in value of products, with 7.2 per cent of the state total for all manufacturing industries, and shows a much greater growth for the five-year period 1904-1909 than for the preceding five-year period. In 1909 it was the leading industry in the state in average number of wage earners employed, having 52,266, or 11.2 per cent of the state total.

Clothing, men's, including shirts.—This classification includes the making of men's and boys' ready-made clothing and of overalls, butchers' aprons, bathing suits, and gymnasium clothing, and the manufacture of all kinds of shirts—cotton, linen, flannel, etc.—as well as of shirt bosoms, and of shirt waists for men and boys. Most of the establishments engaged in this industry in Illinois are located in Chicago. The number of establishments increased from 624 in 1904 to 715 in 1909, the average number of wage earners increased from 21,355 to 36,152, or 69.3 per cent, and the value of products from \$57,002,000 to \$89,473,000, or 57 per cent.

Printing and publishing.—This classification includes the printing and publishing of books, newspapers and periodicals, and music, job printing, bookbinding and blank-book making, steel and copper plate engraving, and lithographing. In this industry Illinois ranks second only to New York, with a value of products in 1909 forming 11.8 per cent of the total for the United States. There were 2,608 establishments reported in 1909, as against 2,414 in 1904 and 2,150 in 1899. The figures indicate a considerable growth in the industry throughout the decade. The leading items going to make up the total value of products in 1909 were as follows: Job printing, \$28,010,000; book and pamphlet printing and publishing, \$9,399,000; subscriptions and sales of newspapers, \$8,937,000; newspaper advertising, \$13,720,000; subscriptions and sales of periodicals, \$5,722,000; periodical advertising, \$6,893,000; bookbinding and blank-book making, \$5,756,000; and electrotyping, engraving, and lithographing, \$5,456,000.

Iron and steel, steel works and rolling mills.—This industry embraces the manufacture of steel and the

hot rolling of iron and steel. It also includes the making of forgings and castings and the manufacture of rolled iron and steel into more highly finished forms when conducted as a part of the rolling-mill operations. It does not, however, include the making of cold-rolled products, nor of forgings, castings, and other manufactures of iron and steel by establishments not equipped with steel-making furnaces or hot trains of rolls. There were 24 establishments in Illinois in 1909 coming under this classification, or one more than in 1904. In 1909 this industry ranked fifth in the state in value of products, in 1904 it was fourth, and in 1899 third. From 1904 to 1909 the value of products for Illinois increased 44.3 per cent, as compared with an increase of 46.3 per cent for the entire country for the same period. Of the total value of products for the industry in the United States, Illinois contributed 8.8 per cent in 1909 and 8.9 per cent in 1904, holding third position among the states in each year.

Iron and steel, blast furnaces.—These establishments include those engaged in the manufacture of pig iron from the ore. The number of establishments in this industry increased from four in 1904 to six in 1909. In value of products there was an increase of \$10,969,000, or 40.1 per cent, from 1904 to 1909, as compared with an increase of \$12,177,000, or 80.4 per cent, from 1899 to 1904. Illinois contributed \$38,300,000, or 9.8 per cent of the total value of products for all blast furnaces in the United States, in 1909, as compared with \$27,331,000, or 11.8 per cent, in 1904, and \$15,154,000, or 7.3 per cent, in 1899. At the last three censuses Illinois has ranked third among the states in this industry.

The manufacture of wire is a very important branch of the iron and steel industry in Illinois, but the statistics can not be presented separately because of the possible disclosure of individual operations. Seven establishments manufacturing wire were reported in 1909 and four in 1904.

Agricultural implements.—This classification includes the manufacture of various kinds of seeders and planters, implements of cultivation, harvesting implements, seed separators, etc. There was an overproduction of agricultural implements in Illinois in 1903, followed by a curtailment of manufacture in 1904. The figures for 1904, the year covered by the census, are therefore below the normal. The value of the products of the industry shows a decrease of 8.6 per cent in 1904 as compared with 1899, but in 1909 it amounted to \$57,268,000, representing an increase of 49.1 per cent as compared with 1904, and of 36.2 per cent as compared with 1899. Illinois is the leading state in this industry, reporting 39.1 per cent of the total value of products for the United States in 1909, 34.3 per cent in 1904, and 41.5 per cent in 1899.

Liquors, distilled.—This industry was seventh in the state in 1909 and in 1899 as measured by value of products, and sixth in 1904. In 1909, as in 1904

and 1899, Illinois ranked first in this industry in the United States, reporting products in 1909 valued at \$55,200,000, or 27 per cent of the total for the United States. Of the total value of products of this industry in the state in 1909, more than three-fourths (\$42,758,000) represents the Federal internal-revenue tax. The greater part of the distilled liquors made in Illinois was corn whisky, the state ranking high in the production of corn.

Liquors, malt.—During the five-year period 1904-1909 the number of breweries decreased from 116 to 106, but there was an increase of 365, or 9.1 per cent, in the average number of wage earners and of \$4,662,000, or 19.6 per cent, in the value of products.

Flour-mill and gristmill products.—This classification includes mills grinding wheat, rye, barley, buckwheat, or corn, but it does not include mills doing custom grinding exclusively, or factories making fancy cereals or other food preparations as a chief product. Statistics for custom gristmills, however, are presented separately on page 728. The number of establishments reporting increased from 363 in 1904 to 461 in 1909, and during the same period there was a slight increase (54) in the average number of wage earners reported, and an increase of \$11,219,000, or 28.1 per cent, in value of products.

Lumber and timber products.—This industry embraces logging operations, sawmills, planing mills, and establishments engaged in the manufacture of wooden packing boxes. It does not include mills engaged exclusively or chiefly in custom sawing for local consumption, statistics for which are given on page 728. Over one-half of the 814 establishments reporting were sawmills, but the greater part of the total value of products was reported by the planing mills, which include establishments making sash, doors, blinds, stairwork, moldings, and interior woodwork. From 1904 to 1909 the value of products increased \$12,211,000, or 37.3 per cent.

Cars and general shop construction and repairs by steam-railroad companies.—Among the manufacturing industries this one is peculiar in that it is practically confined to repairs on the rolling stock and equipment of the railroad companies operating the plants, and that except to the very limited extent that repair work is done for other companies the amount shown as value of products represents only the cost of materials added to the expenditure for salaries and wages, etc. The industry does not include minor repairs made in round-houses. From 1904 to 1909 the number of establishments decreased from 99 to 73, while the average number of wage earners increased 4,036, or 21.1 per cent, and the value of products \$6,738,000, or 26.4 per cent.

Cars, steam-railroad, not including operations of railroad companies.—For this industry Illinois reported in 1909 more than one-fifth of the total value of products for the United States. While the number of estab-

lishments in the state increased from 16 in 1904 to 28 in 1909, and the average number of wage earners from 9,036 to 10,945, or 21.1 per cent, the value of products decreased \$3,925,000, or 12.7 per cent. Eighteen of the car construction shops reported in 1909 were in Chicago. The products of these plants include sleeping cars, dining cars, chair cars, mail, express, and baggage cars, and refrigerator cars, as well as ordinary passenger coaches and many kinds of freight cars. In 1904 Illinois held first place in value of products for this industry in the United States, but in 1909 it stood second.

Furniture and refrigerators.—This industry embraces the manufacture of wood and metal furniture of all kinds, refrigerators and ice boxes, and store and office fixtures, with the exception of products, such as show cases, which are provided for by a distinct classification. This industry shows increases from 1904 to 1909 of 29 per cent in number of establishments, 9.2 per cent in average number of wage earners, and 24.6 per cent in value of products.

Electrical machinery, apparatus, and supplies.—The most important products of the establishments in this industry in Illinois are insulated wires and cables and telephone apparatus. From 1904 to 1909 the number of establishments increased from 104 to 143, the average number of wage earners increased 3,510, or 57.2 per cent, and the value of products \$10,126,000, or 60.6 per cent. During the preceding five-year period the number of establishments increased from 82 to 104, the number of wage earners increased 1.4 per cent, and the value of products, 37.2 per cent.

Copper, tin, and sheet-iron products.—This classification comprises the manufacture of all sheet-metal products of copper, tin, and sheet iron, including the preparation of copper, tin, or sheet-iron materials for building construction. Between 1904 and 1909 the number of establishments increased from 288 to 483, the average number of wage earners increased 1,828, or 32.4 per cent, and the value of products, \$7,438,000, or 48.3 per cent. In this industry Illinois held second place in the United States in 1909, with 11.4 per cent of the total value of products.

Gas, illuminating and heating.—The number of establishments in this industry increased from 64 in 1904 to 78 in 1909, and the total value of products increased \$5,044,000, or 31.5 per cent.

Musical instruments, pianos and organs and materials.—This classification covers, in general, the manufacture of pianos, organs, and piano-players, and materials used in their construction, such as piano cases, strings, keys, keyboards, pedal attachments, sounding boards, and back frames, organ reeds, pipes, and stops, and piano and organ hardware. It does not include the manufacture of band and orchestral instruments, such as horns, clarinets, flutes, drums, violins, and similar instruments, which are included under the head of "Musical instruments and materials, not specified." In 1909 there were 68 establish-

ments in the industry, as compared with 56 in 1904, and the number of wage earners increased 1,269, or 16.9 per cent, during the five-year period. The value of products shows an increase of 43.9 per cent, as against an increase of 63.4 per cent for the five-year period 1899-1904. Measured by value of products Illinois ranked second in this industry in the United States in 1909, 1904, and 1899, the value of its products forming 21.4 per cent of the total for the country in 1909, and practically 20 per cent in both 1904 and 1899.

Butter, cheese, and condensed milk.—The number of establishments in this industry shows a decrease of 110, or over one-fourth, from 1904 to 1909, and a decrease of 122 from 1899 to 1904. The average number of wage earners increased 17 per cent from 1899 to 1904, but in 1909 the number was practically the same as in 1904. The value of products increased only 3.1 per cent in the earlier five-year period, while in the later period it increased 34.1 per cent. The changes shown for the decade indicate the abandonment of many of the small factories and an increase in the output of the larger ones. Condensed milk is the most important of the products. The state ranked second in the value of condensed milk produced in 1909 (New York leading), seventh in the value of cheese, and eighth in the value of butter. In the total value of products for the industry the state held fifth place in 1909, as compared with fourth place in both 1904 and 1899.

Boots and shoes, including cut stock and findings.—Under this head are included factories making boots and shoes and those whose chief products are cut stock and findings, as well as shops specially engaged in stitching, crimping, fitting, and bottoming, or performing other special operations in connection with the manufacture of boots and shoes. The manufacture of footwear not coming strictly under the head of "Boots and shoes," such as overgaiters, moccasins, and leggings, is also covered by this designation. There were decreases from 1899 to 1904 in the number of establishments, average number of wage earners, and value of products, but there was a decided increase in the industry during the five-year period 1904-1909 and a net increase during the decade.

Clothing, women's.—In addition to the making of suits, dresses, skirts, and shirtwaists, this industry includes the manufacture of women's underwear and night robes, of infants' clothing, and of such articles as belts, dress shields, and hose supporters. From 1904 to 1909 there was an increase of 30, or 15.7 per cent, in the number of establishments in this industry; of 1,461, or 31.2 per cent, in the average number of wage earners; and of \$4,398,000, or 35.9 per cent, in the value of products.

Patent medicines and compounds and druggists' preparations.—Under this head are included establishments making so-called patent medicines and also some compounds that are not used for medicinal purposes, and those manufacturing capsules, extracts,

tinctures, and other pharmaceuticals, and perfumery and cosmetics. There was a decrease of 1.5 per cent in the value of products of this industry, and of 12 per cent in the value added by manufacture during the five-year period 1904-1909, while during the preceding five-year period there were increases of 103.6 per cent and 118.8 per cent, respectively. Measured by value of products, the state ranked third in this industry in the United States in 1909, with 9.2 per cent of the total for the country as a whole.

Automobiles, including bodies and parts.—There was a remarkable growth in the manufacture of automobiles during the five-year period 1904-1909. The number of establishments increased from 12 to 65; the average number of wage earners employed, from 167 to 2,382; and the value of products, from \$357,000 to \$7,154,000.

The rank of the industries shown in the table on pages 702 and 703, on the basis of value added by manufacture is somewhat different from their rank as determined by value of products. Slaughtering and meat packing drops from first place to fourth, the men's clothing industry from third to fifth, and the steel works and rolling mills from fifth to seventh, while the foundry and machine-shop, printing and publishing, and distillery industries become first, second, and third, respectively. The manufacture of agricultural implements, the lumber industry, and the manufacture of paint and varnish are the only industries presented separately in the table which maintain the same rank in both cases, being sixth, ninth, and twentieth, respectively. In those industries in which the manufacturing processes are comparatively simple or are carried on largely by the aid of machinery, the value added by manufacture is not commensurate with the gross value of products and the rank on the basis of value added by manufacture is much lower than the rank on the basis of value of products. This is especially noticeable in the flour-mill and gristmill industry, which drops from eighth place in value of products to twenty-eighth in value added by manufacture; the blast furnaces, which drop from tenth place to twenty-second; the roasting and grinding of coffee and spice, which drops from twenty-second place to thirty-first; and the butter, cheese, and condensed-milk industry, which drops from twenty-fourth place to thirty-fifth. Of the 83 industries presented in this table for which comparative data can be given for both five-year periods, 34 show a greater rate of increase in value of products for the later than for the earlier period; 29 show a lower rate; and 10 show a decrease for the period 1904-1909, while 10 others show a decrease for the period 1899-1904.

As stated in the Introduction, each establishment, as a whole, has been assigned to a given classification according to its products of chief value, so that the figures for any given industry must not be taken either as fully covering or as representing exclusively the operations of that branch of manufacturing indi-

cated by the industry designation. Therefore, in considering the relative importance of the industries shown in the preceding table or in Table II, page 740, it should be noted that the figures for several of the industries listed fall short of being a complete presentation of the statistics for the branch of manufacturing covered by the industry designation. Some conspicuous examples of this kind in Illinois are the following industries, in each of which the value of the products reported in 1909 by establishments included under other classifications exceeded \$1,000,000: Canning and preserving, carriages and wagons and materials, chemicals, women's clothing, foundry and machine-shop products, and patent medicines and compounds and druggists' preparations.

Persons engaged in manufacturing industries.—The following table shows, for 1909, the distribution of the number of persons engaged in manufactures, the average number of wage earners being distributed by sex and age. It should be borne in mind, however, that the sex and age classification of the average number of wage earners in this and other tables is an estimate obtained by the method described in the Introduction.

CLASS.	PERSONS ENGAGED IN MANUFACTURES.		
	Total.	Male.	Female.
All classes.....	561,044	465,139	95,905
Proprietors and officials.....	33,611	32,567	1,044
Proprietors and firm members.....	17,357	16,725	632
Salaried officers of corporations.....	6,764	6,543	216
Superintendents and managers.....	9,490	9,294	196
Clerks.....	61,669	46,390	15,279
Wage earners (average number).....	465,764	386,182	79,582
16 years of age and over.....	458,847	382,661	76,186
Under 16 years of age.....	6,917	3,491	3,426

The average number of persons engaged in manufactures during 1909 was 561,044, of whom 465,764 were wage earners. Of the remainder, 33,611 were proprietors and officials and 61,669 were clerks. Corresponding figures for individual industries will be found in Table II, page 740.

The next table shows, for 1909, the percentage of proprietors and officials, clerks, and wage earners, respectively, among the total number of persons employed in manufactures. It covers all industries combined and 40 important industries individually.

Of the total number of persons engaged in all manufacturing industries, 6 per cent were proprietors and officials, 11 per cent clerks, and 83 per cent wage earners. The highest percentage of proprietors and officials shown for any individual industry, 34.3, is for the butter, cheese, and condensed-milk industry. Many of the establishments in this industry are carried on by cooperative associations, and from the information contained in the reports it was often impossible positively to distinguish such associations from partnerships. It is probable, therefore, that members of some of these cooperative associations have been

tabulated as partners. In the flour-mill and gristmill, tobacco, and bakery industries also the percentage of proprietors and officials is high. In these industries the majority of the establishments are small and the work is to a large extent done by the proprietors or their immediate representatives, so that the proportion of persons engaged in these industries falling into the class of proprietors and officials is very much higher than for most other industries or for all industries combined.

INDUSTRY.	PERSONS ENGAGED IN MANUFACTURES.			
	Total number.	Per cent of total.		
		Proprietors and officials.	Clerks.	Wage earners (average number).
All industries	561,044	6.0	11.0	83.0
Agricultural implements.....	21,511	3.0	7.5	80.4
Automobiles, including bodies and parts.....	2,804	5.8	0.2	85.0
Baking powders and yeast.....	1,133	5.2	36.8	58.0
Boots and shoes, including cut stock and findings.....	6,392	2.4	7.0	90.6
Bread and other bakery products.....	12,566	20.5	11.0	68.5
Brick and tile.....	7,347	8.5	2.0	89.5
Butter, cheese, and condensed milk.....	3,000	34.3	8.0	57.7
Canning and preserving.....	2,800	8.1	6.8	85.1
Carriages and wagons and materials.....	6,746	8.0	5.8	86.7
Cars and general shop construction and repairs by steam-railroad companies.....	24,406	1.6	3.6	94.8
Cars, steam-railroad, not including operations of railroad companies.....	11,782	1.7	5.4	92.0
Clocks and watches, including cases and materials.....	5,883	0.8	2.9	96.3
Clothing, men's, including shirts.....	41,122	3.1	9.0	87.9
Clothing, women's.....	7,270	5.6	9.9	84.5
Coffee and spice, roasting and grinding.....	1,792	5.2	37.9	56.8
Confectionery.....	4,622	4.8	13.0	82.2
Copper, tin, and sheet-iron products.....	8,897	8.8	7.2	84.0
Electrical machinery, apparatus, and supplies.....	11,854	3.6	15.1	81.3
Flour-mill and gristmill products.....	3,634	21.9	10.3	67.8
Foundry and machine-shop products.....	61,303	4.9	0.8	85.3
Furnishing goods, men's.....	3,116	3.8	9.0	86.3
Furniture and refrigerators.....	15,240	4.0	6.3	89.1
Gas, illuminating and heating.....	8,020	3.4	18.1	78.6
Iron and steel, blast furnaces.....	2,927	1.3	13.6	85.2
Iron and steel, steel works and rolling mills.....	19,437	1.5	8.0	90.5
Leather goods.....	3,569	8.0	0.3	82.6
Leather, tanned, curried, and finished.....	3,194	2.5	3.6	94.0
Liquors, distilled.....	851	3.8	8.1	88.1
Liquors, malt.....	5,361	6.8	11.2	82.0
Lumber and timber products.....	19,025	7.7	5.2	87.1
Millinery and lace goods.....	9,987	6.0	10.5	83.5
Musical instruments, pianos and organs and materials.....	9,628	2.3	6.6	91.2
Paint and varnish.....	2,900	8.1	30.2	61.7
Patent medicines and compounds and druggists' preparations.....	3,902	14.1	38.0	47.9
Printing and publishing.....	43,074	10.2	23.3	66.5
Slaughtering and meat packing.....	32,642	1.0	17.1	81.8
Smelting and refining, zinc.....	2,634	1.8	3.7	94.5
Soap.....	3,408	2.8	33.0	64.2
Stoves and furnaces, including gas and oil stoves.....	5,223	3.8	10.0	86.1
Tobacco manufactures.....	10,707	21.1	3.9	75.0
All other industries.....	115,920	6.7	10.7	82.6

On account of the large average number of wage earners per establishment in certain industries, the proportion of proprietors and officials in the industry is small. The more important industries of this class are the manufacture of clocks and watches, slaughtering and meat packing, blast furnaces, steel works and rolling mills, steam-railroad repair shops, car construction shops, and the smelting and refining of zinc.

The following table shows, for 1909, in percentages, for all industries combined, the distribution of the average number of wage earners by age periods, and of those 16 years of age and over by sex, calculated in the manner described in the Introduction. It also shows, for some of the important industries separately, a similar distribution of wage earners as reported for

December 15, or the nearest representative day. As a means of judging the importance of the several industries the average number employed for the year is also given in each case.

INDUSTRY.	WAGE EARNERS.			
	Average number. ¹	Per cent of total.		
		16 years of age and over.		Under 16 years of age.
Male.	Female.			
All industries	465,764	82.2	16.3	1.5
Agricultural implements.....	19,240	98.7	1.2	0.1
Automobiles, including bodies and parts.....	2,382	98.6	1.4	0.1
Baking powders and yeast.....	657	45.1	54.0	0.9
Boots and shoes, including cut stock and findings.....	5,792	61.2	38.0	5.8
Bread and other bakery products.....	8,611	79.4	19.3	1.3
Brick and tile.....	6,574	99.3	.....	0.7
Butter, cheese, and condensed milk.....	1,732	79.3	19.9	0.8
Canning and preserving.....	2,383	48.6	48.0	3.4
Carriages and wagons and materials.....	5,852	98.1	1.7	0.2
Cars and general shop construction and repairs by steam-railroad companies.....	23,131	99.8	0.2	(?)
Cars, steam-railroad, not including operations of railroad companies.....	10,945	99.0	0.4	.....
Clocks and watches, including cases and materials.....	5,665	55.0	44.4	0.6
Clothing, men's, including shirts.....	36,152	47.0	60.3	2.8
Clothing, women's.....	6,151	31.1	67.4	1.5
Coffee and spice, roasting and grinding.....	1,618	55.9	41.2	2.9
Confectionery.....	3,790	34.4	58.9	6.7
Copper, tin, and sheet-iron products.....	7,473	85.3	13.0	1.7
Electrical machinery, apparatus, and supplies.....	9,641	75.3	24.3	0.5
Flour-mill and gristmill products.....	2,464	99.3	0.6	0.1
Foundry and machine-shop products.....	52,266	97.2	2.4	0.4
Furnishing goods, men's.....	2,688	12.4	84.2	3.4
Furniture and refrigerators.....	13,575	96.4	2.3	1.3
Gas, illuminating and heating.....	6,301	100.0	.....	.....
Iron and steel, blast furnaces.....	2,493	100.0	.....	.....
Iron and steel, steel works and rolling mills.....	17,584	99.8	0.1	0.1
Leather goods.....	2,949	86.5	12.8	1.1
Leather, tanned, curried, and finished.....	3,001	99.8	0.2	.....
Liquors, distilled.....	750	94.4	6.6	.....
Liquors, malt.....	4,398	98.0	1.4	0.6
Lumber and timber products.....	16,567	98.0	0.8	1.1
Millinery and lace goods.....	3,328	18.8	75.4	5.8
Musical instruments, pianos and organs and materials.....	8,777	91.0	5.5	3.5
Paint and varnish.....	1,792	89.0	10.3	0.8
Patent medicines and compounds and druggists' preparations.....	1,809	43.2	48.7	8.1
Printing and publishing.....	28,644	74.1	23.3	2.6
Slaughtering and meat packing.....	26,705	88.8	11.0	0.1
Smelting and refining, zinc.....	1,922	99.3	.....	0.7
Soap.....	2,188	69.7	24.9	5.4
Stoves and furnaces, including gas and oil stoves.....	4,499	99.2	(?)	.....
Tobacco manufactures.....	8,034	69.1	28.9	2.0
All other industries.....	95,772	78.5	19.2	2.3

¹ For method of estimating the distribution, by sex and age periods, of the average number in all industries combined, see Introduction.

² Less than one-tenth of 1 per cent.

In all manufacturing industries combined, 82.2 per cent of the average number of wage earners in 1909 were males 16 years of age and over; 16.3 per cent, females 16 years of age and over; and 1.5 per cent, children under the age of 16. The men's clothing industry employed more women than any other one industry, and together with the women's clothing and men's furnishing goods industries, employed nearly one-third of the total number of female wage earners 16 years of age and over reported for the state. Other industries employing large numbers of female wage earners were printing and publishing, slaughtering and meat packing, and the manufacture of clocks and watches, millinery and lace goods, electrical machinery, tobacco products, and fancy and paper boxes. Of the industries presented in the table above, those which show the highest proportion of female wage earners 16 years of age or over

are the men's furnishing goods industry, with 84.2 per cent; the millinery and lace goods industry, with 75.4 per cent; and the women's clothing industry, with 67.4 per cent. Statistics for a number of other less important industries in which the female wage earners predominate will be found in Table II, page 740. Of the wage earners under 16 years of age, 46.9 per cent were employed in the seven industries which reported an average of over 200 such wage earners each. These industries were the men's clothing industry, with an average of 995; printing and publishing, with 739; the manufacture of fancy and paper boxes, with 410; the boot and shoe industry, with 334; the manufacture of pianos and organs, with 309; the confectionery industry, with 255; and foundries and machine shops, with 202. The proportion of children in the total number of wage earners was highest (8.1 per cent) in the manufacture of patent medicines and compounds, but the average number employed was only 151.

In order to compare the distribution of persons engaged in manufactures in 1909 with that shown at the census of 1904, it is necessary to use the classification employed at the earlier census. (See Introduction.) The following table makes this comparison according to occupational status:

CLASS.	PERSONS ENGAGED IN MANUFACTURES.				
	1909		1904		Per cent of increase, 1904-1909.
	Number.	Percent distribution.	Number.	Percent distribution.	
Total.....	561,044	100.0	447,947	100.0	25.2
Proprietors and firm members.....	17,357	3.1	15,990	3.1	24.1
Salaried employees.....	77,923	13.9	54,521	12.2	42.9
Wage earners (average number).....	465,764	83.0	379,436	84.7	22.8

Comparable figures are not obtainable for 1899. Salaried employees show the greatest percentage of increase and constitute the only class forming a larger proportion of the total in 1909 than in 1904.

The following table shows the average number of wage earners, distributed according to age periods, and in the case of those 16 years of age and over according to sex, for 1909, 1904, and 1899. The averages for 1909 are estimated on the basis of the actual number reported for a single representative day. (See Introduction.)

CLASS.	AVERAGE NUMBER OF WAGE EARNERS.					
	1909		1904		1899	
	Number.	Percent distribution.	Number.	Percent distribution.	Number.	Percent distribution.
Total.....	465,764	100.0	379,436	100.0	332,871	100.0
16 years of age and over..	458,847	98.5	374,490	98.7	322,928	97.0
Male.....	382,691	82.2	314,091	82.8	275,006	82.6
Female.....	76,156	16.4	60,399	15.9	47,922	14.4
Under 16 years of age....	6,917	1.5	4,946	1.3	9,943	3.0

The proportion of wage earners under 16 years of age in all manufacturing industries combined was only one-half as great in 1909 as in 1899. There was a moderate increase during the decade, however, in the proportion of female wage earners 16 years of age or over, while the proportion of males 16 years of age or over shows a slight decrease.

Wage earners employed, by months.—The following tabular statement gives the number of wage earners employed on the 15th of each month during the year 1909 for all industries combined; it also gives the percentage which the number reported for each month is of the greatest number reported for any month. In Table II, page 740, are shown, for practically all of the important industries in the state, the largest number and the smallest number of wage earners reported for any month. The figures are for the 15th day, or the nearest representative day, of the month.

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	438,594	88.0	July.....	454,410	91.1
February.....	442,831	88.8	August.....	400,414	82.3
March.....	452,533	90.8	September.....	481,796	96.0
April.....	455,145	91.3	October.....	493,928	99.1
May.....	454,905	91.2	November.....	496,452	99.6
June.....	459,375	92.1	December.....	495,640	100.0

In the number of wage earners employed in all industries combined there was an almost continuous increase throughout the year. This was no doubt due to general business conditions rather than to the employment of labor in the so-called seasonal industries. The maximum number was employed in December, and the minimum number, which was 88 per cent of the maximum, in January.

There are no very important seasonal industries in Illinois, but among the industries which show a considerable fluctuation in the number of wage earners employed throughout the year may be mentioned canning and preserving, with a maximum of 6,539 wage earners in September and a minimum of 1,013, or 15.5 per cent of the maximum, in January; the glass industry, with a maximum of 4,396 in April and May and a minimum of 1,441, or 32.8 per cent of the maximum, in September; the manufacture of artificial stone, with a maximum of 1,040 in June and a minimum of 369, or 35.5 per cent of the maximum, in January; the artificial-ice industry, with a maximum of 1,134 in August and a minimum of 479, or 42.2 per cent of the maximum, in January; and the brick and tile industry, with a maximum of 8,302 in June and a minimum of 3,795, or 45.7 per cent of the maximum, in January. While these five industries show considerable variations, the total number of wage earners employed in them was too small to affect materially the variation in employment for all industries combined.

Prevailing hours of labor.—In the following table wage earners have been classified according to the hours of labor prevailing in the establishments in which they are employed. In making this classification the average number of wage earners employed during the year is used, and the number employed in each establishment is classified as a total according to the hours prevailing in that establishment, even though a few employees work a greater or less number of hours.

Of the wage earners employed in the manufacturing industries of Illinois in 1909, 69.2 per cent worked in establishments where the prevailing hours of labor ranged from 54 to 60 a week. Only 8.1 per cent

worked in establishments where the prevailing hours exceeded 60 a week, and only 22.7 per cent in establishments where they were less than 54 a week. All of the wage earners in the blast-furnace industry and nearly all of those in the cement and gas industries worked in establishments where the prevailing hours exceeded 72 a week, while nearly three-fifths of those in the steelworks and rolling mills were in establishments where the prevailing hours were at least 72 a week. In the breweries, printing and publishing establishments, and tobacco factories, on the other hand, the majority of the wage earners worked 48 hours or less per week.

INDUSTRY.	AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK.									
	Total.	48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.	Over 72.
All industries	405,764	55,055	50,781	120,230	95,008	106,090	10,222	12,389	15,083	
Agricultural implements.....	19,240			380	13,064	5,077	113			
Artificial stone.....	786	125	18	178	30	425				
Automobiles, including bodies and parts.....	2,382	46	250	994	363	713	10			
Babbitt metal and solder.....	183	11	5	4	142	21				
Bags, other than paper.....	180		79	15	74	21				
Baking powders and yeast.....	657	38	11	98	410	40	48			
Belting and hose, leather.....	233	13	55	157						
Bicycles, motor cycles, and parts.....	910	3	8	882	15	7				
Blacking and cleansing and polishing preparations.....	236	19	40	108	56	13				
Boots and shoes, including cut stock and findings.....	5,792	6	57	673	3,056	1,100				
Boxes, cigar.....	404	9		97	108	190				
Boxes, fancy and paper.....	4,085	72	1,412	893	1,348	281	79			
Brass and bronze products.....	1,688	15	77	1,202	203	186	5			
Bread and other bakery products.....	8,611	673	609	4,243	711	1,821	376	132	46	
Brick and tile.....	6,574	2,249	25	1,491	278	2,481	60			
Brooms and brushes.....	820	109	217	90	41	271		2		
Butter, cheese, and condensed milk.....	1,732	131	9	59	40	495	992	2	4	
Buttons.....	548	13	140	45	169	181				
Canning and preserving.....	2,383	61	153	74	270	1,072		109	38	
Carriages and wagons and materials.....	5,852	114	82	1,133	3,077	1,442		4		
Cars and general shop construction and repairs by steam-railroad companies.....	23,131	374	1,605	13,329	578	2,378	4,785		82	
Cars and general shop construction and repairs by street-railroad companies.....	2,240	17		1,349		408	454		12	
Cars, steam-railroad, not including operations of railroad companies.....	10,945	3	530	5,026	2,520	1,953			13	
Cement.....	1,395			40					1,355	
Chemicals.....	836	10		14	38	180	487	48	59	
Clocks and watches, including cases and materials.....	5,065	1	4,328	634	668	30				
Clothing, men's, including shirts.....	36,152	6,043	4,503	13,610	10,400	1,587				
Clothing, women's.....	6,151	649	3,256	1,563	594	89				
Coffee and spice, roasting and grinding.....	1,018	32	198	313	300	115				
Coffins, burial cases, and undertakers' goods.....	732	20	27	237	93	355				
Confectionery.....	3,790	154	390	610	1,259	1,376	1			
Cooperage and wooden goods, not elsewhere specified.....	2,388	109	212	335	1,001	731				
Copper, tin, and sheet-iron products.....	7,473	1,500	129	1,144	3,130	1,478	85			
Corsets.....	1,502	8	401	957	46					
Cotton goods, including cotton small wares.....	1,310		887		90	336				
Cutlery and tools, not elsewhere specified.....	1,393	10	47	772	57	501				
Dairymen's, poultrymen's, and apiarists' supplies.....	323	1	36	82	155	90				
Electrical machinery, apparatus, and supplies.....	9,041	186	8,172	734	453	90			6	
Electroplating.....	875	19	35	172	81	68				
Explosives.....	200	16		137		137				
Fancy articles, not elsewhere specified.....	444	83	83	120	98	60				
Flags, banners, regalia, society badges, and emblems.....	293	21	108	48		110				
Flour-mill and gristmill products.....	2,464	310	50	24	19	1,220	331	471	30	
Foundry and machine-shop products.....	52,260	785	3,431	22,321	13,972	11,054	20		677	
Fur goods.....	319	68	117	108	22	4				
Furnishing goods, men's.....	2,038	1,140	655	120	741	32				
Furniture and refrigerators.....	13,575	216	708	5,617	805	0,229				
Gas and electric fixtures and lamps and reflectors.....	2,090	50	445	1,332	288	19				
Gas, illuminating and heating.....	6,301	7		3	138	562	144	8	5,439	
Glass.....	3,507	94	957	80		676		240	1,460	
Gloves and mittens, leather.....	1,309	134	90	356	679	41			129	
Grease and tallow.....	778	17	148	22		460	2			
Hats and caps, other than felt, straw, and wool.....	463	36	98	170	134	25				
Hosiery and knit goods.....	2,913	83	553	78	1,320	879			259	
Ice, manufactured.....	804	3		2	242	84	139	75	2,433	
Iron and steel, blast furnaces.....	2,493								128	
Iron and steel, steelworks and rolling mills.....	17,534			2,763	1,142	3,230	247	10,074		
Jewelry.....	990	20	309	419	231	11				
Leather goods.....	2,949	107	165	1,091	1,218	300	78			
Leather, tanned, curried, and finished.....	3,001		313	57	1,197	1,484			47	
Lime.....	511			116	30					
Liquors, distilled.....	750	290		130		72		253		
Liquors, malt.....	4,398	3,127	40	714	310	169	7	31		

INDUSTRY.	AVERAGE NUMBER OF WAGE EARNERS IN ESTABLISHMENTS GROUPED ACCORDING TO PREVAILING HOURS OF WORK PER WEEK.								
	Total.	48 and under.	Between 48 and 54.	54.	Between 54 and 60.	60.	Between 60 and 72.	72.	Over 72.
Lumber and timber products.....	16,567	870	461	4,882	5,231	5,087	3	1	32
Marble and stone work.....	2,226	1,057	148	629	153	211	28		
Mattresses and spring beds.....	831	45	78	207	240	266			
Millinery and lace goods.....	3,328	557	1,348	688	626	109			
Mirrors.....	353		160	91	102				
Models and patterns, not including paper patterns.....	426	71	85	171	32	67			
Musical instruments and materials, not specified.....	336	5	37	240		54			
Musical instruments, pianos and organs and materials.....	8,777	121	564	4,604	842	2,646			
Paint and varnish.....	1,792	152	217	148	982	281	12		
Paper and wood pulp.....	1,397				189	446	138	624	
Paper goods, not elsewhere specified.....	1,317	122	201	316	640	38			
Patent medicines and compounds and druggists' preparations.....	1,869	569	541	505	154	99	1		
Photographic apparatus and materials.....	284	21	15	92	156				
Photo-engraving.....	1,114	778	265	56	3	12			
Pottery, terra-cotta, and fire-clay products.....	3,157	613	2	141	1,185				
Printing and publishing.....	28,644	18,064	4,496	3,983	1,293	629	57	122	
Pumps, not including steam pumps.....	282		7	25	71	179			
Scales and balances.....	248	1	86	23	123	15			
Sewing machines, cases, and attachments.....	1,713			663	776	274			
Shipbuilding, including boat building.....	413	39		314		60			
Show cases.....	386	3	15	140	138	90			
Slaughtering and meat packing.....	26,705	2,900	45	1,143	57	22,557	3		
Smelting and refining, zinc.....	1,922				702	698	522		
Smelting and refining, not from the ore.....	369	112		5	101	17	88		46
Soap.....	2,188	8	95	19	49	2,015		2	
Stereotyping and electrotyping.....	592	592							
Stoves and furnaces, including gas and oil stoves.....	4,499	430	53	1,107	811	2,098			
Surgical appliances and artificial limbs.....	536	36	7	478	10	5			
Tobacco manufactures.....	8,034	4,963	700	508	1,028	833	2		
Type founding and printing materials.....	438	21	71	346					
Wall paper.....	290				10	196	84		
Woolen, worsted, and felt goods, and wool hats.....	499		3	107	108	281			
All other industries.....	41,270	3,347	4,729	8,166	11,045	10,250	819	186	2,728

Location of establishments.—The following table shows the extent to which the manufactures of Illinois are centralized in incorporated places of 10,000 inhabitants or over. (See Introduction.)

Owing to the fact that the statistics for Cicero were not tabulated separately for 1899, the figures shown in the table for 1899 fall short to that extent of a complete presentation of the manufactures statistics for the incorporated places having a population of over 10,000 in 1900. In 1909, however, Cicero and

Oak Park (which was organized from part of Cicero in 1902) employed an average of only 940 wage earners in manufacturing industries, while the combined value of their manufactured products was only \$2,578,861, figures which are in each case equivalent to less than one-half of 1 per cent of the corresponding totals for 1899 for incorporated places having a population of 10,000 or over, so that the effect of the omission upon the statistics is negligible.

ITEM.	Year.	Aggregate.	CITIES, TOWNS, AND VILLAGES HAVING A POPULATION OF 10,000 AND OVER.								DISTRICTS OUTSIDE OF CITIES, TOWNS, AND VILLAGES HAVING A POPULATION OF 10,000 AND OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.			
			Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.	Number or amount.	Percent of total.
Population.....	1910	5,638,591	2,950,963	52.3	331,285	5.9	434,395	7.7	2,185,283	38.8	2,687,628	47.7
	1900	4,821,650	2,213,030	46.0	302,885	6.3	216,570	4.5	1,698,575	35.2	2,603,520	54.0
Number of establishments.....	1909	18,026	12,525	69.5	1,079	6.0	1,790	9.9	9,656	53.6	5,501	30.5
	1899	14,374	9,695	67.4	1,080	7.5	947	6.6	7,668	53.3	4,679	32.6
Average number of wage earners.....	1909	465,764	379,741	81.5	33,446	7.2	52,318	11.2	293,977	63.1	86,023	18.5
	1899	332,871	279,322	83.9	31,372	9.4	25,759	8.0	221,191	66.4	53,549	16.1
Value of products.....	1909	\$1,919,276,594	\$1,595,135,636	83.1	\$111,599,951	5.8	\$202,364,554	10.5	\$1,281,171,181	66.8	\$324,140,908	16.9
	1899	1,120,808,308	957,089,720	85.4	59,860,869	5.3	99,349,710	8.9	797,879,141	71.2	163,778,588	14.6
Value added by manufacture..	1909	758,349,904	639,383,749	84.3	46,860,440	6.2	104,821,851	13.8	487,701,468	64.3	118,966,155	15.7
	1899	439,418,186	378,300,775	86.1	29,120,558	6.6	53,529,477	12.2	295,666,740	67.3	61,111,411	13.9

In 1909, 83.1 per cent of the total value of products was reported from incorporated places having over 10,000 inhabitants, and 81.5 per cent of the average number of wage earners were employed in such places. The figures indicate that, except in number of establishments, the manufacturing interests in the territory

outside of such incorporated places gained somewhat, on the whole, during the last decade, in their proportions of the respective totals for the state, in spite of the greater increase in population in the cities.

The make-up of the several groups shown in the table has been affected by the increase in population

of certain of the cities. There were 19 incorporated places having between 10,000 and 25,000 inhabitants in 1900, 5 of which—Decatur, Aurora, Danville, Elgin, and Bloomington—had passed the 25,000 mark in population by 1910, while 1 city—Ottawa—dropped out of the group through a decline in population. These losses were partially made up, however, by the addition in 1910 of the cities of Waukegan, Chicago Heights, Champaign, Mattoon, Lincoln, and Canton, as the result of increases in their population during the decade, while the number of places included in the group was further increased by the organization of Oak Park from part of Cicero in 1902. This group shows a decrease in its proportion of the total for every item presented in the table except value of products, for which it shows an increase from 5.3 per cent of the state total in 1899 to 5.8 per cent in 1909. The influence of the addition of the five cities named above to the group comprising the cities having between 25,000 and 100,000 inhabitants, which increased the number of cities included from 6 to 11, is reflected in the larger proportions which the group contributed to the various totals in 1909 as compared with 1899. Chicago, the only city having more than 100,000 inhabitants, shows a decrease in its proportions of the total for all items except number of establishments. Of the total number of wage earners employed in Illinois in 1909, 63.1 per cent were in Chicago, and 66.8 per cent of the total value of products was credited to this city. The corresponding figures for 1899 were 66.4 per cent and 71.2 per cent, respectively.

The following statement shows the principal statistics for 1909 and 1899 for Ottawa, which had a population in 1900 in excess of 10,000 but which fell below this figure in 1910:

	1909	1899
Population.....	9,535	10,538
Number of establishments.....	52	57
Average number of wage earners.....	1,071	1,020
Value of products.....	\$2,407,985	\$1,737,884
Value added by manufacture.....	\$1,507,002	\$980,032

In the decade 1899-1909 the value of manufactured products for Ottawa increased 42 per cent and the value added by manufacture 52.8 per cent. The leading industries in 1909 were the manufacture of glass, pottery, terra-cotta, and fire-clay products, agricultural implements, carriages and wagons, and pianos. Forty-six per cent of the total number of wage earners were employed in the first two industries named.

The population, in 1910 and 1900, of the 32 incorporated places which had 10,000 inhabitants or over in 1910, and of Ottawa, which had over 10,000 inhabitants in 1900 but less than that number in 1910, is given in the next tabular statement.

CITY, TOWN, OR VILLAGE.	1910	1900	CITY, TOWN, OR VILLAGE.	1910	1900
Chicago.....	2,185,283	1,608,575	Oak Park.....	19,444	(1)
Peoria.....	69,950	56,100	Freeport.....	17,587	13,258
East St. Louis.....	58,547	29,655	Alton.....	17,528	14,210
Springfield.....	51,678	34,150	Waukegan.....	16,069	9,426
Rockford.....	45,401	31,051	Jacksonville.....	15,326	15,078
Quincy.....	30,587	30,252	Cicero.....	14,557	16,310
Joliet.....	34,670	29,353	Cairo.....	14,548	12,560
Decatur.....	31,140	20,764	Chicago Heights.....	14,525	5,100
Aurora.....	29,807	24,147	Streator.....	14,253	14,079
Danville.....	27,871	16,354	Kankakee.....	13,989	13,505
Elgin.....	25,970	22,433	Champaign.....	12,421	9,068
Bloomington.....	25,708	23,285	La Salle.....	11,537	10,440
Evanston.....	24,978	10,259	Mattoon.....	11,456	9,622
Rook Island.....	24,335	19,493	Lincoln.....	10,892	8,962
Moline.....	24,109	17,248	Canton.....	10,453	6,564
Galesburg.....	22,089	18,607	Ottawa.....	9,535	10,538
Belleville.....	21,122	17,484			

¹ Not incorporated in 1900.

The relative industrial importance of each of the 32 municipalities having a population of 10,000 or over in 1910 is shown in the following table, in which the value of products and the average number of wage earners are shown separately for 1909, 1904, and 1899, so far as comparative figures can be given:

CITY, TOWN, OR VILLAGE.	AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.		
	1909	1904	1899	1909	1904	1899
Chicago.....	203,977	241,084	221,191	\$1,281,171,181	\$955,030,277	\$707,879,141
Peoria.....	5,981	6,834	5,900	63,061,155	60,410,598	44,569,371
Joliet.....	6,383	5,792	5,702	38,810,523	32,897,110	26,131,625
Rockford.....	9,309	7,230	5,851	22,205,740	15,276,129	11,021,550
Moline.....	5,440	3,987	4,138	20,801,668	13,158,429	9,502,054
Waukegan ¹	3,090	2,205	495	10,984,082	10,994,247	732,794
East St. Louis.....	5,252	4,505	3,106	18,227,960	10,586,320	6,241,391
Quincy.....	4,032	4,002	3,815	11,435,572	10,748,224	7,918,728
Elgin.....	6,094	4,885	4,370	11,119,070	9,349,274	6,386,243
Aurora.....	5,095	4,078	3,040	10,954,175	7,320,028	5,638,191
Chicago Heights.....	3,953	(2)	(2)	10,839,268	(2)	(2)
Alton.....	2,420	3,060	2,174	10,096,333	8,090,814	4,250,389
Decatur.....	2,600	2,340	1,020	9,707,988	8,607,302	5,133,677
Springfield.....	3,652	3,071	2,109	8,497,245	5,796,637	3,467,045
Freeport.....	2,858	1,510	1,333	7,811,277	3,100,302	2,707,915
Rook Island.....	1,754	1,703	1,885	5,386,770	5,332,907	4,621,530
La Salle.....	1,293	1,107	917	5,307,551	3,158,173	3,309,413
Quincy.....	1,293	2,275	1,071	4,837,980	5,777,060	3,011,899
Bloomington.....	2,077	1,705	1,335	4,614,698	4,356,615	2,878,334
Belleville.....	1,872	1,495	1,501	4,440,148	4,381,465	3,116,515
Cairo.....	1,237	1,435	1,501	3,778,208	2,550,520	830,020
Evanston.....	837	738	400	3,350,590	3,304,120	1,913,762
Danville.....	1,744	1,884	957	2,941,625	(2)	(2)
Canton.....	1,262	(2)	(2)	2,910,001	2,217,772	1,450,092
Galesburg.....	1,466	1,447	1,070	2,723,171	2,089,143	648,713
Kankakee.....	1,340	1,038	877	2,298,700	1,981,582	1,684,250
Jacksonville.....	947	800	1,006	2,137,252	1,838,804	1,244,978
Streator.....	1,275	1,544	1,233	1,461,104	(2)	(2)
Cicero.....	658	(2)	(2)	1,434,420	1,308,781	764,463
Mattoon.....	948	1,022	632	1,117,097	(2)	(2)
Oak Park.....	282	(2)	(2)	846,480	486,220	353,990
Champaign.....	273	289	245	570,243	784,248	375,167
Lincoln.....	220	236	188			

¹ Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

² Figures not available.

³ Not incorporated in 1900.

Every city for which comparative statistics can be given, except Bloomington and Lincoln, shows an increase in value of products from 1904 to 1909, and all but La Salle an increase from 1899 to 1904. The greatest gain, 151.2 per cent, was made by Freeport, and was due largely to the increased production of carriages and wagons, windmills, and patent medicines and compounds. A gain of 81.8 per cent was made by Waukegan, mainly on account of the increased production of glucose and of steel-works and rolling-mill products. The next largest increase, 72.2 per cent,

is shown for East St. Louis, and was due principally to large increases in the output of the steam-railroad repair shops, flour mills and gristmills, chemical works, paint works, and foundries and machine shops.

Chicago, with manufactured products valued at \$1,281,171,181 and an average of 293,977 wage earners in manufacturing industries in 1909, is not only the most important manufacturing city in Illinois but ranks second only to New York City in the United States as a whole.

In fact, there were only four states besides Illinois (namely, New York, Pennsylvania, Massachusetts, and Ohio), which had a greater value of products in 1909 than the city of Chicago. The percentage of increase from 1904 to 1909 in average number of wage earners was 21.5 and in value of products, 34.1, as compared with corresponding percentages of 9.4 and 19.7, respectively, for the preceding five-year period. The rates of increase for Chicago from 1904 to 1909, however, were a little below those shown for the entire state.

The leading industries of Chicago for which statistics can be presented separately, arranged in the order of value of products, are shown in the following table which gives the absolute and relative increase in this respect between 1904 and 1909, and also the percentage which the value of products for each industry represents of the corresponding total for the state:

INDUSTRY.	VALUE OF PRODUCTS.			
	Amount.	Per cent of total for the industry for the state.	Increase over 1904. ¹	
			Amount.	Per cent.
All industries.....	\$1,281,171,000	68.8	\$326,135,000	34.1
Slaughtering and meat packing.....	325,062,000	83.4	54,513,000	20.1
Foundry and machine-shop products.....	89,669,000	64.7	21,178,000	30.9
Clothing, men's, including shirts.....	85,295,000	95.3	30,670,000	56.1
Printing and publishing.....	74,211,000	85.1	21,178,000	39.9
Iron and steel, steelworks and rolling mills.....	45,984,000	53.1	21,144,000	85.1
Lumber and timber products.....	32,709,000	72.8	12,901,000	65.1
Bread and other bakery products.....	26,908,000	74.5	6,254,000	30.3
Cars, steam-railroad, not including operations of railroad companies.....	20,892,000	77.4	-2,907,000	-12.2
Electrical machinery, apparatus, and supplies.....	20,669,000	77.0	4,377,000	26.9
Furniture and refrigerators.....	20,512,000	73.5	2,850,000	16.1
Soap.....	19,939,000	98.8	6,169,000	44.8
Coffee and spice, roasting and grinding.....	19,593,000	99.2	4,030,000	25.9
Liquors, malt.....	19,512,000	68.6	2,529,000	14.9
Paint and varnish.....	18,942,000	92.7	6,277,000	49.6
Tobacco manufactures.....	16,633,000	76.1	5,616,000	51.0
Clothing, women's.....	15,677,000	94.2	4,040,000	34.7
Cars and general shop construction and repairs by steam-railroad companies.....	15,359,000	47.7	4,187,000	37.5
Leather, tanned, curried, and finished.....	13,244,000	88.8	3,824,000	40.6
Copper, tin, and sheet-iron products.....	12,242,000	53.6	4,105,000	50.4
Musical instruments, pianos and organs and materials.....	11,487,000	59.9	2,999,000	35.3
Confectionery.....	11,222,000	87.7	4,672,000	71.3
Patent medicines and compounds and druggists' preparations.....	10,360,000	79.0	-1,582,000	-13.2

¹ A minus sign (-) denotes decrease.

The great importance of the slaughtering and meat-packing industry in Chicago is apparent when it is noted that its value of products formed 25.4 per cent of the total for all manufacturing industries in the city

and 23.7 per cent of the United States total for the industry. Comparative statistics for 60 less important industries, in addition to the 22 shown in the preceding table, are presented for Chicago in Table I, page 733.

In addition to the 82 industries presented separately for Chicago in Table I, page 733, there were 49 others which, for various reasons, are included under the head of "All other industries." Some of these industries were among the most important in the city, 49 reporting products in 1909 exceeding \$1,000,000 in value.¹ Of these, 4 reported products valued at \$10,000,000 or over; 7 reported products between \$5,000,000 and \$10,000,000 in value; and 38 reported products between \$1,000,000 and \$5,000,000 in value.

Peoria, the second city of the state in respect to manufactures, had products in 1909 valued at \$63,061,155, an increase of 4.4 per cent over the figure for 1904. Though the total value of its manufactured products amounted to less than 5 per cent of that for Chicago, Peoria is known widely on account of its distilleries, the value of the products of which in 1909 formed 70.7 per cent of the total for all manufacturing industries of the city. The value of products reported by the four distilleries of Peoria formed a little more than four-fifths of the total for this industry in Illinois, and over one-fifth of the total for the entire country. Other important industries were: Slaughtering and meat packing, cooperage, and printing and publishing; the manufacture of agricultural implements, and of food preparations; and the breweries, foundries and machine shops, flour mills and gristmills, and bakeries.

Joliet holds third place among the manufacturing cities of Illinois. The value of its manufactured products increased 18 per cent and the average number of wage earners in the manufacturing industries, 10.2 per cent between 1904 and 1909. The most important industries of the city in 1909 were steel works and rolling mills, blast furnaces, and the manufacture of wire, and of coke, each of which was represented by one establishment. Over one-half of both the total

¹ These industries are:

Agricultural implements.	Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steelworks or rolling mills.
Babbitt metal and solder.	Lard, refined, not made in slaughtering and meat-packing establishments.
Balting and hose, woven and rubber.	Lead, bar, pipe, and sheet.
Bicycles, motor cycles, and parts.	Looking-glass and picture frames.
Blacking and cleansing and polishing preparations.	Malt.
Butter, cheese, and condensed milk.	Millinery and lace goods.
Butter, reworking.	Mineral and soda waters.
Cash registers and calculating machines.	Moving pictures.
Coke.	Oil, linseed.
Cordage and twine and jute and linen goods.	Oleomargarine.
Cordials and syrups.	Paper and wood pulp.
Fertilizers.	Pottery, terra-cotta, and fire-clay products.
Flour-mill and gristmill products.	Roofing materials.
Food preparations.	Saws.
Gas, illuminating and heating.	Signs and advertising novelties.
Glass, cutting, staining, and ornamenting.	Smelting and refining, lead.
Glue.	Soda-water apparatus.
Gold and silver, reducing and refining, not from the ore.	Sporting and athletic goods.
Hair work.	Stationery goods, not elsewhere specified.
House-furnishing goods, not elsewhere specified.	Sulphuric, nitric, and mixed acids.
Instruments, professional and scientific.	Upholstering materials.
Iron and steel, blast furnaces.	Wall paper.
Iron and steel, bolts, nuts, washers, and rivets, not made in steelworks or rolling mills.	Windmills.
Iron and steel forgings.	Window shades and fixtures.
	Wool scouring.

number of wage earners and the total value of products was credited to the steelworks and rolling mills and the blast furnaces. The manufacture of coke is a comparatively new industry in Joliet.

Rockford has a great diversity of manufactures, but the furniture factories, knitting mills, agricultural-implement shops, and foundries and machine shops were the most important in 1909. The city shows a gain of 28.6 per cent in average number of wage earners and 45.8 per cent in value of products for the five-year period 1904-1909.

Moline is well known on account of the large number of plows manufactured there. Four establishments manufacturing agricultural implements gave employment to more than one-half the total number of wage earners in 1909 and reported more than one-half the total value of products for the city. Other important industries were the manufacture of carriages and wagons, foundry and machine-shop products, steelworks and rolling-mill products, and automobiles. The city shows an increase from 1904 to 1909 of 36.7 per cent in average number of wage earners and of 58.8 per cent in value of products.

The chief industries of Waukegan are the manufacture of glucose and the steelworks and rolling mills; these two industries gave employment to about two-thirds of the wage earners in 1909 and reported over three-fourths of the total value of products for the city. This city, whose population was less than 10,000 in 1900, shows an increase of 36.4 per cent in average number of wage earners from 1904 to 1909, and of 81.8 per cent in value of products. It may be noted also that the value of products reported in 1909 was more than twenty-seven times that in 1899.

East St. Louis made a large increase (72.2 per cent) in value of products between 1904 and 1909. The most important industries in the city in 1909 were flour mills and gristmills, foundries and machine shops, steel works and rolling mills, the chemical industry, slaughtering and meat packing, and the manufacture of paints and of paper and wood pulp. Several very large slaughtering and meat-packing establishments are located at the National Stock Yards, just outside the city limits, but the statistics presented for cities are confined to establishments within the city limits.

In Quincy the principal industries in 1909 were the manufacture of stoves and furnaces, slaughtering and meat packing, the manufacture of food preparations, foundries and machine shops, and breweries. The increase in value of products from 1904 to 1909 was only 6.4 per cent, and there was a decrease in the average number of wage earners employed.

Elgin is well known for the manufacture of watch movements. The manufacture of clocks and watches, including cases and materials, of foundry and machine-shop products and of condensed milk, and printing and publishing were the chief contributors to Elgin's manufacturing importance in 1909, the four industries

employing over three-fourths of the average number of wage earners and reporting more than one-half of the total value of products.

Aurora shows an increase of 24.9 per cent in number of wage earners and of 49.5 per cent in total value of products from 1904 to 1909. The leading industries were steam-railroad repair shops, foundries and machine shops, and the manufacture of bicycles, motor cycles, and parts, and of cotton goods.

The leading industries in Chicago Heights in 1909 were foundries and machine shops, steelworks and rolling mills, and steam-railroad car construction shops. These three industries reported a majority of the average number of wage earners and more than one-half the total value of products for the city.

While Alton shows a decrease of 640, or 20.9 per cent, between 1904 and 1909 in the average number of wage earners in its manufacturing industries, there was an increase of 16.1 per cent in the value of its manufactured products. Flour mills and gristmills, glassworks, and slaughtering and meat packing were the leading industries, and together contributed four-fifths of the total value of products. More than one-half of the average number of wage earners reported for the city were employed in the glassworks.

The leading industries of the other incorporated places included in the preceding table are shown in the following statement:

CITY, TOWN, OR VILLAGE	Principal industries.
Deatur.....	Flour-mill and gristmill products.
Springfield.....	Foundry and machine-shop products. Agricultural implements. Boots and shoes.
Freeport.....	Flour-mill and gristmill products. Watches. Carriages and wagons and materials. Windmills.
Rock Island.....	Patent medicines and compounds. Foundry and machine-shop products. Agricultural implements. Lumber and timber products. Oilcloth and linoleum.
La Salle.....	Smelting and refining, zinc. Cement.
Bloomington.....	Steam-railroad repair shops.
Belleville.....	Stoves and furnaces. Boots and shoes.
Cairo.....	Flour-mill and gristmill products. Lumber and timber products.
Evanston.....	Wrought-iron and steel pipe.
Danville.....	Steam-railroad repair shops.
Canton.....	Agricultural implements.
Galesburg.....	Steam-railroad repair shops. Foundry and machine-shop products.
Kankakee.....	Hosiery and knit goods.
Jacksonville.....	Men's clothing.
Streator.....	Glass.
Cicero.....	Foundry and machine-shop products. Wrought-iron and steel pipe.
Mattoon.....	Steam-railroad repair shops.
Oak Park.....	Gas, illuminating and heating.
Champaign.....	Leather goods. Pianos.
Lincoln.....	Printing and publishing. Coffins, burial cases, and undertakers' goods. Mattresses and spring beds.

Character of ownership.—The table that follows has for its purpose the presentation of conditions in respect to the character of ownership or legal organization of manufacturing enterprises. For all industries combined comparative figures are given covering the censuses of 1909 and 1904. Comparative data for 1899 are not available. Figures for 1909

only are presented for several important industries individually. In order to avoid disclosing the operations

of individual concerns it is necessary to omit several important industries from this table and the one following.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
ALL INDUSTRIES:									
1909	18,026	465,764	\$1,919,276,594	\$758,349,904					
1904	14,921	379,436	1,410,342,129	570,284,813					
Individual:									
1909	9,654	46,524	134,438,296	63,726,740					
1904	7,933	44,563	108,126,545	54,692,327					
Firm:									
1909	2,966	43,524	133,149,273	57,994,839					
1904	2,690	37,983	120,637,913	52,031,245					
Corporation:									
1909	5,209	374,855	1,646,518,916	634,229,181					
1904	4,145	290,610	1,179,028,840	462,870,654					
Other:									
1909	197	861	5,176,109	2,399,144					
1904	163	280	2,548,831	690,637					
Per cent of total:									
1909	100.0	100.0	100.0	100.0					
1904	100.0	100.0	100.0	100.0					
Individual:									
1909	53.6	10.0	7.0	8.4					
1904	53.2	11.7	7.7	9.6					
Firm:									
1909	16.5	9.3	6.9	7.6					
1904	18.0	10.0	8.6	9.1					
Corporation:									
1909	23.9	80.5	85.8	83.6					
1904	27.8	78.2	83.6	81.2					
Other:									
1909	1.1	0.2	0.3	0.3					
1904	1.1	0.1	0.2	0.1					
Boots and shoes, including outstock and findings, 1909									
Individual	53	5,792	\$16,754,704	\$5,885,892					
Firm	17	510	1,516,025	595,983					
Corporation	9	399	815,241	301,945					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	32.1	8.8	9.0	10.1					
Firm	17.0	6.9	4.9	5.1					
Corporation	50.9	84.3	86.1	84.7					
Brick and tile, 1909									
Individual	340	6,574	\$9,765,051	\$7,273,693					
Firm	146	862	1,220,274	986,633					
Corporation	94	4,935	7,441,668	5,447,499					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	42.9	13.1	12.5	13.6					
Firm	29.4	11.8	11.3	11.5					
Corporation	27.6	75.1	76.2	74.9					
Butter, cheese, and condensed milk, 1909									
Individual	295	1,732	\$17,798,278	\$3,531,357					
Firm	90	101	1,574,475	206,046					
Corporation	43	83	1,384,527	177,776					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	30.5	5.8	8.8	5.8					
Firm	14.0	4.8	7.8	5.0					
Corporation	28.5	83.5	74.2	83.3					
Other	26.4	5.8	9.2	5.8					
Canning and preserving, 1909									
Individual	118	2,383	\$7,619,586	\$2,806,890					
Firm	45	264	685,092	273,374					
Corporation	24	504	1,642,999	619,071					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	38.1	11.1	9.0	9.7					
Firm	20.3	21.1	21.6	22.1					
Corporation	41.6	67.8	69.4	68.2					
Carriages and wagons and materials, 1909									
Individual	325	5,852	\$16,831,283	\$7,351,948					
Firm	201	797	1,714,435	1,000,483					
Corporation	69	421	1,052,885	586,986					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	61.8	13.6	10.2	13.6					
Firm	21.2	7.2	6.3	8.0					
Corporation	16.9	79.2	83.6	78.4					
Clothing, men's, including shirts, 1909									
Individual	715	36,152	\$89,472,755	\$44,244,475					
Firm	449	8,378	12,400,131	7,804,224					
Corporation	179	18,383	49,006,695	22,064,782					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	62.8	23.2	13.9	17.6					
Firm	25.0	50.8	54.8	49.9					
Corporation	12.2	26.0	31.4	32.5					
Clothing, women's, 1909									
Individual	221	6,151	\$16,635,236	\$7,421,710					
Firm	107	1,817	3,935,904	1,696,652					
Corporation	71	2,778	6,900,832	2,673,294					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	45.4	29.5	23.7	25.6					
Firm	32.1	45.2	41.8	38.7					
Corporation	19.5	25.3	34.5	35.7					
Confectionery, 1909									
Individual	140	3,799	\$12,798,077	\$5,132,679					
Firm	66	437	1,368,845	540,311					
Corporation	22	198	630,027	189,121					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	47.1	11.5	10.7	10.5					
Firm	15.7	5.2	4.9	3.7					
Corporation	37.1	83.3	84.4	85.8					
Copper, tin, and sheet-iron products, 1909									
Individual	483	7,473	\$22,822,810	\$9,629,647					
Firm	283	1,008	2,742,344	1,623,761					
Corporation	102	977	3,023,028	1,534,653					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	58.6	13.5	12.0	16.9					
Firm	21.1	13.1	13.2	15.9					
Corporation	20.3	73.4	74.7	67.2					
Flour-mill and gristmill products, 1909									
Individual	461	2,464	\$51,110,681	\$5,521,110					
Firm	210	424	1,368,845	770,668					
Corporation	146	421	6,622,994	923,049					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	45.6	17.2	16.1	14.0					
Firm	31.7	17.1	13.0	16.7					
Corporation	22.8	65.7	70.9	69.3					
Foundry and machine-shop products, 1909									
Individual	1,178	52,266	\$138,578,993	\$74,768,805					
Firm	360	3,764	8,475,204	4,769,850					
Corporation	150	1,834	4,288,137	2,258,710					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	30.6	7.2	6.1	6.4					
Firm	12.7	3.5	3.1	3.0					
Corporation	56.7	89.3	90.8	90.6					
Furniture and refrigerators, 1909									
Individual	267	13,575	\$27,900,262	\$15,399,042					
Firm	88	1,224	2,409,423	1,453,540					
Corporation	40	903	2,005,844	997,832					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	33.0	9.0	8.6	9.4					
Firm	15.0	6.7	7.2	6.5					
Corporation	52.1	84.3	84.2	84.1					
Leather goods, 1909									
Individual	168	2,949	\$8,948,324	\$3,813,354					
Firm	88	716	2,149,577	916,325					
Corporation	39	459	1,441,018	704,581					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	52.4	24.3	24.0	24.0					
Firm	23.2	15.6	16.1	18.5					
Corporation	24.4	60.2	59.9	57.5					
Leather, tanned, curried, and finished, 1909									
Individual	29	3,001	\$14,911,782	\$2,781,173					
Firm	14	201	1,086,873	218,334					
Corporation	9	325	1,684,428	359,539					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	13.8	6.7	7.3	7.8					
Firm	31.0	10.8	11.3	12.9					
Corporation	55.2	82.5	81.4	79.2					
Lumber and timber products, 1909									
Individual	814	16,567	\$44,951,804	\$17,687,608					
Firm	437	2,369	5,419,920	2,749,240					
Corporation	169	1,059	2,210,937	1,133,303					
Per cent of total	100.0	100.0	100.0	100.0					
Individual	53.7	14.3	12.1	15.5					
Firm	20.8	6.4	4.9	6.4					
Corporation	25.6	79.3	83.0	78.0					

1 Includes the group "Other," to avoid disclosure of individual operations.

INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND CHARACTER OF OWNERSHIP.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
Millinery and lace goods, 1909.					Patent medicines and compounds and druggists' preparations, 1909—Con.				
Individual.....	103	3,328	\$7,281,914	\$3,484,618	Per cent of total.....	100.0	100.0	100.0	100.0
Firm.....	30	373	690,519	377,801	Individual.....	42.6	13.9	11.0	10.7
Corporation.....	29	834	1,054,243	660,288	Firm.....	16.0	5.2	7.0	4.5
Per cent of total.....	100.0	100.0	100.0	100.0	Corporation.....	47.4	81.0	82.0	84.8
Individual.....	37.9	11.2	9.6	10.8	Printing and publishing, 1909.				
Firm.....	28.2	25.1	20.8	27.0	Individual.....	2,608	28,644	\$87,247,000	\$82,567,117
Corporation.....	34.0	63.7	63.6	61.6	Firm.....	1,352	3,764	10,252,467	7,889,922
Paint and varnish, 1909.					Corporation.....	423	2,524	5,610,653	4,118,519
Individual.....	74	1,792	\$20,434,291	\$7,532,680	Other.....	729	21,914	69,133,460	48,764,031
Firm.....	10	115	675,344	258,466	Per cent of total.....	104	442	2,250,520	1,794,645
Corporation.....	5	67	502,894	206,403	Individual.....	100.0	100.0	100.0	100.0
Per cent of total.....	100.0	100.0	100.0	100.0	Firm.....	51.8	13.1	11.8	12.6
Individual.....	13.5	6.4	3.3	3.4	Corporation.....	16.2	8.8	6.4	6.6
Firm.....	6.8	3.7	2.5	2.7	Other.....	28.0	76.5	79.2	77.9
Corporation.....	70.7	89.8	94.2	93.8	Slaughtering and meat packing, 1909.	4.0	1.5	2.0	2.9
Patent medicines and compounds and druggists' preparations, 1909.					Individual.....	109	28,705	\$389,594,908	\$45,618,899
Individual.....	359	1,869	\$13,114,307	\$8,701,289	Firm.....	36	688	9,844,597	857,279
Firm.....	153	259	1,440,203	933,545	Corporation.....	19	350	4,082,255	742,958
Corporation.....	36	97	918,020	391,058	Per cent of total.....	54	25,667	374,768,064	44,018,662
Per cent of total.....	100.0	100.0	100.0	100.0	Individual.....	100.0	100.0	100.0	100.0
Individual.....	153	259	1,440,203	933,545	Firm.....	33.0	2.6	2.5	1.9
Firm.....	36	97	918,020	391,058	Corporation.....	17.4	1.3	1.3	1.6
Corporation.....	170	1,513	10,756,075	7,376,886	Per cent of total.....	40.5	96.1	96.2	96.5

¹ Includes the group "Other," to avoid disclosure of individual operations.

The most important point brought out by this table is the extent of corporate ownership. In all industries combined 28.9 per cent of the total number of establishments were under corporate ownership in 1909, as compared with 27.8 per cent in 1904. Establishments operated by corporations reported 85.8 per cent of the total value of products in 1909, however, and 83.6 per cent in 1904. Establishments under firm ownership represented only 16.5 per cent of the total number in 1909, as against 18 per cent in 1904, and both these establishments and those owned by individuals reported a smaller proportion of the total number of wage earners and the total value of products in 1909 than in 1904.

In 8 of the 20 individual industries for which figures are given in the table, namely, the manufacture of paint and varnish; the foundries and machine shops; the tanning, currying, and finishing of leather; the manufacture of furniture and refrigerators; the manufacture of boots and shoes; slaughtering and meat packing; the manufacture of patent medicines and compounds; and canning and preserving, there was a larger number of establishments under corporate management than under any other form of ownership, while in all except two of the industries shown—the men's clothing and the women's clothing industries—the establishments operated by corporations contributed the greater part of the total value of products and of the total value added by manufacture. In three industries—foundries and machine shops, the manufacture of paint and varnish, and slaughtering and meat packing—over 90 per cent of the total value of products and total value added by manufacture was reported by establishments under corporate ownership. Firm ownership predominates in the men's clothing and women's clothing industries.

Size of establishment.—The tendency for manufacturing to become concentrated in large establishments, or the reverse, is a matter of interest from the standpoint of industrial organization. In order to throw some light upon it the next table groups the establishments according to the value of their products. The table also shows the average size of establishments for all industries combined and for certain important industries separately, as measured by average number of wage earners, value of products, and value added by manufacture. The totals for all industries are shown for the last two censuses, while for the industries presented separately figures are given for 1909 only.

The table shows that of the 18,026 manufacturing establishments in the state in 1909 only 273, or 1.5 per cent, had a value of products exceeding \$1,000,000. These establishments, however, employed an average of 179,787 wage earners, or 38.6 per cent of the total number in all establishments, and reported 56.2 per cent of the total value of products and 44.9 per cent of the total value added by manufacture.

On the other hand, the very small establishments—that is, those having a value of products of less than \$5,000—constituted a considerable proportion (34.3 per cent) of the total number of establishments, but the value of their products amounted to only eight-tenths of 1 per cent of the total. The great bulk of the manufacturing was done in establishments having products valued at not less than \$100,000.

It will be seen from the table that during the five years from 1904 to 1909 there was a considerable increase in the relative importance of the largest establishments—those reporting products valued at not less than \$1,000,000—as measured by number of wage earners, value of products, and value added by manufacture.

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
ALL INDUSTRIES:					Carriages and wagons and materials, 1909.....				
1909.....	13,026	465,764	\$1,919,276,594	\$758,349,904	Less than \$5,000.....	325	5,852	\$18,831,283	\$7,351,948
1904.....	14,921	379,436	1,410,342,129	570,284,813	\$5,000 and less than \$20,000.....	122	173	341,836	230,353
Less than \$5,000:					\$20,000 and less than \$100,000.....	128	649	1,242,315	780,090
1909.....	6,181	7,000	15,040,868	9,864,314	\$100,000 and less than \$1,000,000.....	46	740	1,901,131	944,169
1904.....	8,208	7,086	12,892,051	8,741,174	\$1,000,000 and over.....	25	2,642	7,482,204	3,211,022
\$5,000 and less than \$20,000:					Average per establishment.....	4	1,648	5,863,737	2,189,314
1909.....	5,823	27,327	59,794,517	36,175,677	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	4,785	26,594	49,128,916	30,404,988	Less than \$5,000.....	37.5	3.0	2.0	3.1
\$20,000 and less than \$100,000:					\$5,000 and less than \$20,000.....	39.4	11.1	7.4	10.6
1909.....	3,773	65,907	170,400,943	91,858,220	\$20,000 and less than \$100,000.....	14.2	12.6	11.3	12.8
1904.....	3,157	60,375	142,152,020	78,956,368	\$100,000 and less than \$1,000,000.....	7.7	45.1	44.5	43.7
\$100,000 and less than \$1,000,000:					\$1,000,000 and over.....	1.2	28.2	34.8	29.7
1909.....	1,976	185,743	595,294,165	280,112,984	Average per establishment.....			\$51,789	\$22,621
1904.....	1,593	156,171	451,011,747	215,350,376	Clothing, men's, including shirts, 1909.....				
\$1,000,000 and over:					Less than \$5,000.....	715	36,152	\$89,472,755	\$44,244,475
1909.....	273	179,787	1,078,740,101	340,338,700	\$5,000 and less than \$20,000.....	135	618	378,496	343,280
1904.....	168	129,210	755,157,389	236,831,917	\$20,000 and less than \$100,000.....	297	4,724	3,210,703	2,928,566
Per cent of total:					\$100,000 and less than \$1,000,000.....	173	6,131	7,134,896	4,876,629
1909.....	100.0	100.0	100.0	100.0	\$1,000,000 and over.....	91	7,426	30,185,453	14,379,391
1904.....	100.0	100.0	100.0	100.0	Average per establishment.....	19	17,253	48,563,207	21,716,609
Less than \$5,000:					Per cent of total.....	100.0	100.0	100.0	100.0
1909.....	34.3	1.5	0.8	1.3	Less than \$5,000.....	18.9	1.7	0.4	0.8
1904.....	34.9	1.9	0.9	1.5	\$5,000 and less than \$20,000.....	41.5	13.1	3.6	6.6
\$5,000 and less than \$20,000:					\$20,000 and less than \$100,000.....	24.2	17.0	8.0	11.0
1909.....	32.3	5.9	3.1	4.8	\$100,000 and less than \$1,000,000.....	12.7	20.5	33.7	32.5
1904.....	32.1	7.0	3.5	5.3	\$1,000,000 and over.....	2.7	47.7	54.3	49.1
\$20,000 and less than \$100,000:					Average per establishment.....			\$125,137	\$61,880
1909.....	20.9	14.2	8.9	12.1	Clothing, women's, 1909.....				
1904.....	21.2	15.9	10.1	13.8	Less than \$5,000.....	221	6,151	\$16,635,236	\$7,421,710
\$100,000 and less than \$1,000,000:					\$5,000 and less than \$20,000.....	21	54	54,982	44,020
1909.....	11.0	39.9	31.0	36.9	\$20,000 and less than \$100,000.....	64	616	740,280	508,541
1904.....	10.7	41.2	32.0	37.8	\$100,000 and less than \$1,000,000.....	94	2,154	4,583,549	2,182,099
\$1,000,000 and over:					\$1,000,000 and less than \$1,000,000.....	42	3,327	11,256,425	4,687,050
1909.....	1.5	38.6	56.2	44.9	Per cent of total.....	100.0	100.0	100.0	100.0
1904.....	1.1	34.1	53.5	41.5	Less than \$5,000.....	9.5	0.9	0.3	0.6
Average per establishment:					\$5,000 and less than \$20,000.....	29.0	10.0	4.4	6.9
1909.....		26	\$106,473	\$42,070	\$20,000 and less than \$100,000.....	42.5	35.0	27.6	29.4
1904.....		25	94,521	38,220	\$100,000 and less than \$1,000,000.....	19.0	54.1	67.7	63.2
Boots and shoes, including cut stock and findings, 1909.....					Average per establishment.....			\$75,273	\$33,582
Less than \$5,000.....	53	5,792	\$16,754,704	\$5,885,882	Confectionery, 1909.....				
\$5,000 and less than \$20,000.....	9	17	25,920	15,580	Less than \$5,000.....	140	3,799	\$12,798,077	\$5,132,679
\$20,000 and less than \$100,000.....	7	63	80,828	49,762	\$5,000 and less than \$20,000.....	40	48	92,991	53,006
\$100,000 and less than \$1,000,000.....	11	236	631,935	202,302	\$20,000 and less than \$100,000.....	47	198	509,871	277,744
\$1,000,000 and over.....	19	2,192	5,470,633	1,697,074	\$100,000 and less than \$1,000,000.....	29	553	1,488,859	668,103
Average per establishment:					\$1,000,000 and over.....	21	1,972	6,392,445	2,556,127
1909.....		26	\$106,473	\$42,070	Average per establishment.....	3	1,028	4,313,951	1,568,699
1904.....		25	94,521	38,220	Per cent of total.....	100.0	100.0	100.0	100.0
Brick and tile, 1909.....					Less than \$5,000.....	28.6	1.3	0.7	1.0
Less than \$5,000.....	340	6,574	\$9,785,051	\$7,273,693	\$5,000 and less than \$20,000.....	35.0	5.2	4.0	5.4
\$5,000 and less than \$20,000.....	134	311	320,186	258,363	\$20,000 and less than \$100,000.....	20.7	14.6	11.6	13.0
\$20,000 and less than \$100,000.....	139	1,146	1,307,510	1,035,211	\$100,000 and over.....	18.0	51.9	49.9	50.0
\$100,000 and less than \$1,000,000.....	44	1,429	1,982,832	1,513,753	Average per establishment.....	2.1	27.1	33.7	29.6
Average per establishment:								\$91,415	\$36,662
1909.....		109	\$316,126	\$111,054	Copper, tin, and sheet-iron products, 1909.....				
1904.....		109	316,126	111,054	Less than \$5,000.....	483	7,473	\$22,822,810	\$9,629,647
Per cent of total:					\$5,000 and less than \$20,000.....	151	170	436,710	287,382
1909.....	100.0	100.0	100.0	100.0	\$20,000 and less than \$100,000.....	205	849	2,147,022	1,321,954
1904.....	100.0	100.0	100.0	100.0	\$100,000 and less than \$1,000,000.....	93	1,446	3,964,658	2,682,118
Less than \$5,000:					\$1,000,000 and over.....	31	3,259	10,078,576	4,284,133
1909.....	39.4	4.7	3.3	3.6	Average per establishment.....	3	1,749	6,194,944	1,654,060
1904.....	40.9	17.4	13.4	14.2	Per cent of total.....	100.0	100.0	100.0	100.0
\$5,000 and less than \$20,000:					Less than \$5,000.....	31.3	2.3	1.9	3.0
1909.....	12.9	21.7	20.3	20.8	\$5,000 and less than \$20,000.....	42.4	11.4	9.4	13.7
1904.....	12.9	21.7	20.3	20.8	\$20,000 and less than \$100,000.....	19.3	19.3	17.4	21.6
\$5,000 and less than \$20,000:					\$100,000 and less than \$1,000,000.....	6.4	43.6	44.2	44.5
1909.....	35.8	37.8	32.7	28.8	\$1,000,000 and over.....	0.6	23.4	27.1	17.2
1904.....	35.8	37.8	32.7	28.8	Average per establishment.....			\$47,252	\$19,937
\$100,000 and less than \$1,000,000:					Flour-mill and gristmill products, 1909.....				
1909.....	13.2	56.7	63.5	66.6	Less than \$5,000.....	461	2,464	\$51,110,681	\$5,521,110
Average per establishment:					\$5,000 and less than \$20,000.....	113	69	284,604	66,764
1909.....		109	\$316,126	\$111,054	\$20,000 and less than \$100,000.....	117	172	1,285,941	301,997
1904.....		109	316,126	111,054	\$100,000 and less than \$1,000,000.....	153	495	6,942,159	1,133,944
Butter, cheese, and condensed milk, 1909.....					\$1,000,000 and over.....	68	1,133	22,355,864	2,571,742
Less than \$5,000.....	295	1,732	\$17,798,278	\$3,531,357	Average per establishment.....	10	595	20,242,113	1,446,663
\$5,000 and less than \$20,000.....	29	17	77,289	15,442	Per cent of total.....	100.0	100.0	100.0	100.0
\$20,000 and less than \$100,000.....	140	142	1,519,150	269,319	Less than \$5,000.....	24.5	2.8	0.6	1.2
\$100,000 and less than \$1,000,000.....	96	246	4,038,145	538,169	\$5,000 and less than \$20,000.....	25.4	7.0	2.5	5.5
Average per establishment:					\$20,000 and less than \$100,000.....	33.2	20.1	13.6	20.5
1909.....		6	\$30,333	\$11,971	\$100,000 and less than \$1,000,000.....	14.8	46.0	43.7	46.6
1904.....		6	30,333	11,971	\$1,000,000 and over.....	2.2	24.1	39.6	26.2
Per cent of total:					Average per establishment.....			\$110,869	\$11,976
1909.....	100.0	100.0	100.0	100.0	Foundry and machine-shop products, 1909.....				
1904.....	100.0	100.0	100.0	100.0	Less than \$5,000.....	1,173	52,266	\$138,578,893	\$74,768,805
Less than \$5,000:					\$5,000 and less than \$20,000.....	201	246	557,632	367,899
1909.....	9.8	1.0	0.4	0.4	\$20,000 and less than \$100,000.....	320	1,587	3,554,851	2,245,284
1904.....	9.8	1.0	0.4	0.4	\$100,000 and less than \$1,000,000.....	403	8,060	19,762,639	11,265,059
\$5,000 and less than \$20,000:					\$1,000,000 and less than \$1,000,000.....	22	26,403	69,525,659	37,442,727
1909.....	47.5	8.2	8.5	7.6	Average per establishment.....			\$110,869	\$11,976
1904.....	47.5	8.2	8.5	7.6	Foundry and machine-shop products, 1909.....				
\$20,000 and less than \$100,000:					Less than \$5,000.....	201	246	557,632	367,899
1909.....	32.5	14.2	22.7	15.2	\$5,000 and less than \$20,000.....	320	1,587	3,554,851	2,245,284
1904.....	32.5	14.2	22.7	15.2	\$20,000 and less than \$100,000.....	403	8,060	19,762,639	11,265,059
\$100,000 and less than \$1,000,000:					\$100,000 and less than \$1,000,000.....	22	26,403	69,525,659	37,442,727
1909.....	10.2	76.6	68.3	76.7	Average per establishment.....			\$110,869	\$11,976
1904.....	10.2	76.6	68.3	76.7	Foundry and machine-shop products, 1909.....				
Average per establishment:					Less than \$5,000.....	201	246	557,632	367,899
1909.....		6	\$30,333	\$11,971	\$5,000 and less than \$20,000.....	320	1,587	3,554,851	2,245,284
1904.....		6	30,333	11,971	\$20,000 and less than \$100,000.....	403	8,060	19,762,639	11,265,059
Per cent of total:					\$100,000 and less than \$1,000,000.....	22	26,403	69,525,659	37,442,727
1909.....	100.0	100.0	100.0	100.0	Average per establishment.....			\$110,869	\$11,976
1904.....	100.0	100.0	100.0	100.0	Foundry and machine-shop products, 1909.....				
Less than \$5,000:					Less than \$5,000.....	201	246	557,632	367,899

INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.	INDUSTRY AND VALUE OF PRODUCTS.	Number of establishments.	Average number of wage earners.	Value of products.	Value added by manufacture.
Foundry and machine-shop products, 1909—Continued.					Millinery and lace goods, 1909—Continued.				
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	17.1	0.5	0.4	0.5	Less than \$5,000.....	10.7	0.8	0.3	0.3
\$5,000 and less than \$20,000.....	27.9	3.0	2.6	3.0	\$5,000 and less than \$20,000.....	31.1	6.3	4.5	4.5
\$20,000 and less than \$100,000.....	34.2	15.4	14.3	15.0	\$20,000 and less than \$100,000.....	40.8	30.8	27.3	31.5
\$100,000 and less than \$1,000,000.....	18.8	50.5	50.2	50.1	\$100,000 and less than \$1,000,000.....	17.5	62.1	62.1	62.3
\$1,000,000 and over.....	2.0	30.0	32.6	31.4	Average per establishment.....		32	\$70,698	\$33,831
Average per establishment.....		44	\$117,039	\$63,471					
Furniture and refrigerators, 1909.					Paint and varnish, 1909.....				
Less than \$5,000.....	267	13,575	\$27,900,202	\$15,399,042	Less than \$5,000.....	74	1,792	\$20,434,291	\$7,532,680
\$5,000 and less than \$20,000.....	32	33	80,025	52,720	\$5,000 and less than \$20,000.....	7	6	18,099	9,770
\$20,000 and less than \$100,000.....	60	396	780,301	508,150	\$20,000 and less than \$100,000.....	11	17	119,138	72,665
\$100,000 and less than \$1,000,000.....	85	2,364	4,248,913	2,432,744	\$100,000 and less than \$1,000,000.....	20	110	1,019,334	384,322
\$1,000,000 and over.....	78	9,131	19,123,074	10,466,903	\$1,000,000 and over.....	30	997	10,500,588	3,705,626
Average per establishment.....	3	1,651	3,067,340	1,938,450	Average per establishment.....	6	662	8,080,234	3,300,397
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	12.0	0.2	0.3	0.3	Less than \$5,000.....	9.5	0.3	0.1	0.1
\$5,000 and less than \$20,000.....	25.8	2.9	2.8	3.3	\$5,000 and less than \$20,000.....	14.9	1.0	0.6	1.0
\$20,000 and less than \$100,000.....	31.8	17.4	15.2	15.8	\$20,000 and less than \$100,000.....	27.0	6.1	5.0	5.1
\$100,000 and less than \$1,000,000.....	29.2	67.3	68.5	68.0	\$100,000 and less than \$1,000,000.....	40.5	55.6	51.8	50.0
\$1,000,000 and over.....	1.1	12.2	13.1	12.0	\$1,000,000 and over.....	8.1	37.0	42.5	43.8
Average per establishment.....		51	\$104,405	\$57,674	Average per establishment.....		24	\$276,139	\$101,793
Leather goods, 1909.....					Patent medicines and compounds and druggists' preparations, 1909.....				
Less than \$5,000.....	188	2,949	\$8,948,324	\$3,813,354	Less than \$5,000.....	359	1,869	\$13,114,307	\$8,701,289
\$5,000 and less than \$20,000.....	21	25	65,093	36,318	\$5,000 and less than \$20,000.....	147	57	307,575	219,700
\$20,000 and less than \$100,000.....	74	294	801,787	400,548	\$20,000 and less than \$100,000.....	219	228	1,127,216	778,186
\$100,000 and less than \$1,000,000.....	47	767	2,208,911	1,109,623	\$100,000 and less than \$1,000,000.....	60	501	3,335,838	2,160,017
Average per establishment.....	26	1,863	5,872,663	2,257,865	\$1,000,000 and less than \$1,000,000.....	24	1,083	8,343,628	5,543,386
Per cent of total.....	100.0	100.0	100.0	100.0	Per cent of total.....	100.0	100.0	100.0	100.0
Less than \$5,000.....	12.5	0.8	0.7	1.0	Less than \$5,000.....	40.9	3.0	2.3	2.5
\$5,000 and less than \$20,000.....	44.0	10.0	9.0	10.7	\$5,000 and less than \$20,000.....	33.1	12.2	8.6	8.9
\$20,000 and less than \$100,000.....	28.0	26.0	24.7	20.1	\$20,000 and less than \$100,000.....	19.2	26.8	25.4	24.8
\$100,000 and less than \$1,000,000.....	15.5	63.2	65.0	69.2	\$100,000 and less than \$1,000,000.....	6.7	57.9	63.6	63.7
Average per establishment.....		18	\$53,264	\$22,699	Average per establishment.....		5	\$36,630	\$24,238
Leather, tanned, curried, and finished, 1909.....					Printing and publishing, 1909.....				
Less than \$5,000.....	29	3,001	\$14,911,788	\$2,781,173	Less than \$5,000.....	2,608	28,644	\$87,247,090	\$62,567,117
\$5,000 and less than \$20,000.....	9	78	395,526	100,932	\$5,000 and less than \$20,000.....	1,148	1,433	2,044,438	2,303,626
\$20,000 and less than \$100,000.....	15	1,202	5,876,552	1,250,158	\$20,000 and less than \$100,000.....	830	3,405	8,435,336	6,673,012
\$100,000 and over.....	5	1,721	8,630,704	1,424,083	\$100,000 and less than \$1,000,000.....	470	7,085	20,580,593	15,438,093
Per cent of total.....	100.0	100.0	100.0	100.0	\$1,000,000 and over.....	142	12,388	30,279,032	26,421,736
Less than \$5,000.....	31.0	2.6	39.4	45.2	Average per establishment.....	9	4,273	19,007,043	12,770,930
\$5,000 and less than \$20,000.....	51.7	40.1	57.0	51.2	Per cent of total.....	100.0	100.0	100.0	100.0
\$20,000 and less than \$100,000.....	17.2	57.3	\$514,190	\$96,903	Less than \$5,000.....	44.0	5.0	3.4	3.8
Average per establishment.....		103			\$5,000 and less than \$20,000.....	31.8	12.1	9.7	10.5
Lumber and timber products, 1909.....					\$20,000 and less than \$100,000.....	18.4	24.7	23.6	24.7
Less than \$5,000.....	814	16,567	\$44,951,804	\$17,687,608	\$100,000 and less than \$1,000,000.....	5.4	43.2	41.6	40.6
\$5,000 and less than \$20,000.....	306	568	717,759	485,855	\$1,000,000 and over.....	0.3	14.9	21.8	20.4
\$20,000 and less than \$100,000.....	180	1,012	1,808,702	1,112,506	Average per establishment.....		11	\$33,454	\$23,990
\$100,000 and less than \$1,000,000.....	171	3,980	8,526,678	4,170,080	Slaughtering and meat packing, 1909.....				
\$1,000,000 and over.....	91	9,197	23,734,818	9,000,200	Less than \$5,000.....	109	26,705	\$389,594,908	\$45,618,899
Average per establishment.....	6	1,810	10,073,787	2,240,901	Less than \$5,000.....	6	6	21,000	9,533
Per cent of total.....	100.0	100.0	100.0	100.0	\$5,000 and less than \$20,000.....	13	31	140,451	44,381
Less than \$5,000.....	45.0	3.4	1.6	2.7	\$20,000 and less than \$100,000.....	23	134	1,203,290	225,779
\$5,000 and less than \$20,000.....	22.1	6.1	4.2	6.3	\$100,000 and less than \$1,000,000.....	43	1,240	15,448,649	2,411,898
\$20,000 and less than \$100,000.....	21.0	24.0	19.0	23.6	\$1,000,000 and over.....	24	25,285	372,775,417	42,927,258
\$100,000 and less than \$1,000,000.....	11.2	55.5	62.8	54.0	Per cent of total.....	100.0	100.0	100.0	100.0
\$1,000,000 and over.....	0.7	10.9	22.4	12.7	Less than \$5,000.....	5.5	(¹)	(²)	(³)
Average per establishment.....		20	\$55,223	\$21,729	\$5,000 and less than \$20,000.....	11.9	0.1	(³)	0.1
Millinery and lace goods, 1909.....					\$20,000 and less than \$100,000.....	21.1	0.5	0.3	0.5
Less than \$5,000.....	103	3,328	\$7,281,914	\$3,484,618	\$100,000 and less than \$1,000,000.....	39.4	4.7	4.0	5.3
Less than \$5,000.....	11	25	21,840	12,040	\$1,000,000 and over.....	22.0	94.7	95.7	94.1
\$5,000 and less than \$20,000.....	32	211	320,117	204,336	Average per establishment.....		245	\$3,574,265	\$418,522
\$20,000 and less than \$100,000.....	42	1,026	1,991,093	1,090,275					
\$100,000 and less than \$1,000,000.....	18	2,066	4,942,894	2,171,967					

¹ Includes the groups "Less than \$5,000" and "\$5,000 and less than \$20,000."

² Includes the group "\$1,000,000 and over."

³ Less than one-tenth of 1 per cent.

The fact that the average value of products per establishment increased between 1904 and 1909 from \$94,521 to \$106,473, and the value added by manufacture from \$38,220 to \$42,070, can not be taken as in itself indicating a tendency toward concentration. The increased values shown may be, and probably are, due in part to the increase that has taken place in the prices of commodities. The average number of wage earners per establishment increased from 25 to 26.

Of the individual industries for which figures are given in the table, those in which the average size of establishment as measured by value of products was smallest, were the manufacture of brick and tile; printing and publishing; the manufacture of patent

medicines and compounds and druggists' preparations; the manufacture of copper, tin, and sheet-iron products; and the manufacture of carriages and wagons. In each of these industries more than 70 per cent of the establishments reported products valued at less than \$20,000 for the year 1909. The industries in which the average value of products per establishment was the largest were slaughtering and meat packing, the tanning, currying, and finishing of leather, the manufacture of boots and shoes, and the paint and varnish industry, in which 61.5 per cent, 69 per cent, 49 per cent, and 48.6 per cent, respectively, of the establishments reported products valued at \$100,000 or over.

In some respects, and especially from the standpoint of conditions under which persons engaged in manufactures work, the best classification of the establishments to bring out the feature of size is a classification according to the number of wage earners employed.

The following table shows, for 1909, such a classification for all industries combined and for certain important industries individually, and gives not only the number of establishments falling into each group but also the average number of wage earners employed.

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
NUMBER OF ESTABLISHMENTS.										
All industries.....	18,026	2,518	8,801	3,560	1,578	709	541	194	86	39
Agricultural implements.....	79	5	16	17	5	9	13	6	4	4
Automobiles, including bodies and parts.....	65	2	28	13	12	6	4	2		
Baking powders and yeast.....	24	2	10	4	5	2	1			
Boots and shoes, including cut stock and findings.....	53	1	12	9	10	5	9	4	3	
Bread and other bakery products.....	2,099	328	1,540	197	16	3	11	3	1	
Brick and tile.....	340	2	188	97	27	14	11	1	2	
Butter, cheese, and condensed milk.....	295	29	232	16	9	5	4			
Canning and preserving.....	118	10	46	29	19	9	5			
Carriages and wagons and materials.....	325	25	191	68	17	11	7	5	1	
Cars and general shop construction and repairs by steam-railroad companies.....	73		5	9	10	7	18	11	9	4
Cars, steam-railroad, not including operations of railroad companies.....	28	1	1	3	5	2	8	4	3	1
Clocks and watches, including cases and materials.....	19	1	7	3	1	2	1	1	2	1
Clothing, men's, including shirts.....	715	20	122	285	188	57	20	12	6	5
Clothing, women's.....	221	4	40	88	60	19	8	2		
Coffee and spice, roasting and grinding.....	35		14	9	6	3	2	1		
Confectionery.....	140	8	70	29	16	6	8	3		
Copper, tin, and sheet-iron products.....	483	23	294	117	22	11	11	4		1
Electrical machinery, apparatus, and supplies.....	143	5	55	42	17	14	6	1	1	2
Flour-mill and gristmill products.....	461	70	297	66	22	6				
Foundry and machine-shop products.....	1,178	65	409	321	194	69	78	29	10	3
Furnishing goods, men's.....	61	3	15	16	14	5	6	2		
Furniture and refrigerators.....	267	6	67	66	51	40	29	5	3	
Gas, illuminating and heating.....	78		34	20	9	10	4			1
Iron and steel, blast furnaces.....	6					1		3	2	
Iron and steel, steel works and rolling mills.....	24				1	2	7	5	4	5
Leather goods.....	168	7	82	43	24	7	4	1		
Leather, tanned, curried, and finished.....	29		3	7	4	5	7	2	1	
Liquors, distilled.....	9		1		1	2	4			
Liquors, malt.....	106		12	36	32	16	5	2		
Lumber and timber products.....	814	20	459	181	77	41	24	10	2	
Millinery and lace goods.....	103		24	39	24	10	4	2		
Musical instruments, pianos and organs and materials.....	68	1	8	17	14	6	12	7	2	1
Paint and varnish.....	74	2	38	11	13	5	5			
Patent medicines and compounds and druggists' preparations.....	359	116	185	38	13	5				
Printing and publishing.....	2,608	708	1,218	433	144	54	34	11	6	
Slaughtering and meat packing.....	109	5	32	22	21	12	5	1	2	9
Smelting and refining, zinc.....	5						2	1		
Soap.....	34	1	17	5	5	1	2	1	2	
Stoves and furnaces, including gas and oil stoves.....	71	1	16	14	16	8	12	4		
Tobacco manufactures.....	1,944	681	1,000	212	33	11	5		2	
All other industries.....	4,195	368	2,014	978	421	205	143	48	16	2
AVERAGE NUMBER OF WAGE EARNERS.										
All industries.....	485,764	20,079	40,022	51,490	50,856	82,889	68,781	57,742	95,905	
Agricultural implements.....	19,240	35	186	172	618	1,889	2,108	3,037	11,185	
Automobiles, including bodies and parts.....	2,332	65	156	402	466	737	556			
Baking powders and yeast.....	657	24	36	184	163	250				
Boots and shoes, including cut stock and findings.....	5,792	30	120	371	402	1,631	1,416	1,922		
Bread and other bakery products.....	8,611	3,070	1,775	429	214	1,655	911	657		
Brick and tile.....	6,574	346	1,092	887	1,030	1,511	300	1,208		
Butter, cheese, and condensed milk.....	1,732	348	182	301	363	558				
Canning and preserving.....	2,333	140	322	664	710	547				
Carriages and wagons and materials.....	5,832	496	709	539	729	1,217	1,642	620		
Cars and general shop construction and repairs by steam-railroad companies.....	23,131	13	123	313	450	3,021	4,123	5,904	9,184	
Cars, steam-railroad, not including operations of railroad companies.....	10,945	3	51	209	146	1,385	1,640	2,509	5,002	
Clocks and watches, including cases and materials.....	5,665	12	41	22	148	207	396	1,413	3,426	
Clothing, men's, including shirts.....	36,152	353	3,665	5,825	4,064	3,186	4,176	4,221	10,662	
Clothing, women's.....	6,151	140	1,130	1,850	1,311	1,045	660			
Coffee and spice, roasting and grinding.....	1,018	44	107	196	178	238	255			
Confectionery.....	3,799	158	342	533	442	1,195	1,129			
Copper, tin, and sheet-iron products.....	7,473	697	1,207	748	778	1,543	1,474			
Electrical machinery, apparatus, and supplies.....	9,641	145	469	529	966	699	437	665	1,026	5,731
Flour-mill and gristmill products.....	2,464	634	684	718	428					
Foundry and machine-shop products.....	52,266	1,131	3,813	6,336	5,001	12,366	10,455	5,833	7,306	
Furnishing goods, men's.....	2,688	39	201	431	365	944	708			
Furniture and refrigerators.....	13,575	180	729	1,872	2,964	4,277	1,667	1,886		
Gas, illuminating and heating.....	6,301	81	214	272	727	537			4,470	
Iron and steel, blast furnaces.....	2,493				80		900	1,513		
Iron and steel, steel works and rolling mills.....	17,584			42	177	1,234	1,511	2,610	12,010	
Leather goods.....	2,949	251	513	769	548	593				
Leather, tanned, curried, and finished.....	3,001	5	93	137	367	1,126	620	653		
Liquors, distilled.....	750			29	135	582				
Liquors, malt.....	4,398	39	488	1,151	1,373	640	707			
Lumber and timber products.....	16,567	917	1,996	2,487	2,969	3,438	3,476	1,284		
Millinery and lace goods.....	3,328	66	441	775	735	699	612			
Musical instruments, pianos and organs and materials.....	8,777	23	223	471	423	1,979	2,601	1,533	1,524	
Paint and varnish.....	1,792	109	164	480	395	644				
Patent medicines and compounds and druggists' preparations.....	1,869	379	530	578	394	328				
Printing and publishing.....	28,644	2,943	4,686	4,505	3,784	5,372	3,289	4,060		
Slaughtering and meat packing.....	26,705	90	265	724	891	954	254	1,617	21,910	
Smelting and refining, zinc.....	1,922					283	345	1,204		
Soap.....	2,188	42	41	165	58	322	267	1,293		
Stoves and furnaces, including gas and oil stoves.....	4,499	44	152	438	603	1,850	1,352			
Tobacco manufactures.....	8,034	1,966	2,104	980	777	807		1,355		
All other industries.....	95,772	4,813	11,067	14,081	14,484	21,600	16,513	10,725	2,489	

INDUSTRY.	Total.	ESTABLISHMENTS EMPLOYING—								
		No wage earners.	1 to 5 wage earners.	6 to 20 wage earners.	21 to 50 wage earners.	51 to 100 wage earners.	101 to 250 wage earners.	251 to 500 wage earners.	501 to 1,000 wage earners.	Over 1,000 wage earners.
		PER CENT OF AVERAGE NUMBER OF WAGE EARNERS.								
All industries.....	100.0	4.3	8.6	11.1	10.9	17.8	14.3	12.4	20.6	
Agricultural implements.....	100.0	0.2	1.0	0.9	3.2	0.8	11.0	15.9	58.0	
Automobiles, including bodies and parts.....	100.0	2.7	6.5	16.0	19.0	30.9	23.3			
Baking powders and yeast.....	100.0	3.7	5.5	28.0	24.8	38.1				
Boots and shoes, including cut stock and findings.....	100.0	0.5	2.1	6.4	6.9	20.4	24.4	33.2		
Bread and other bakery products.....	100.0	35.7	20.0	5.0	2.5	18.1	10.6	7.6		
Brick and tile.....	100.0	8.3	18.0	13.5	15.7	23.0	4.6	18.4		
Butter, cheese, and condensed milk.....	100.0	20.1	9.4	17.4	21.0	32.2				
Canning and preserving.....	100.0	5.9	13.5	27.9	29.8	23.0				
Carrriages and wagons and materials.....	100.0	8.5	12.1	9.2	12.5	20.8	28.1	8.9		
Cars and general shop construction and repairs by steam-railroad companies.....	100.0	0.1	0.5	1.4	1.9	13.1	17.8	25.5	39.7	
Cars, steam-railroad, not including operations of railroad companies.....	100.0	(¹)	0.5	1.9	1.3	12.7	15.0	22.0	45.7	
Clocks and watches, including cases and materials.....	100.0	0.2	0.7	0.4	2.0	3.7	7.0	24.9	60.5	
Clothing, men's, including shirts.....	100.0	1.0	10.1	16.1	11.2	8.8	11.6	11.7	28.5	
Clothing, women's.....	100.0	2.3	18.4	30.2	21.3	17.0	10.8			
Coffee and spice, roasting and grinding.....	100.0	4.3	10.5	10.3	17.5	23.4	25.0			
Confectionery.....	100.0	4.2	9.0	14.0	11.6	31.5	20.7			
Copper, tin, and sheet-iron products.....	100.0	9.3	16.2	10.0	10.4	20.6	19.7		13.7	
Electrical machinery, apparatus, and supplies.....	100.0	1.5	4.9	5.5	10.0	7.2	4.5	6.9	59.4	
Flour-mill and gristmill products.....	100.0	25.7	27.8	29.1	17.4					
Foundry and machine-shop products.....	100.0	2.2	7.3	12.1	9.6	23.7	20.0	11.2	14.0	
Furnishing goods, men's.....	100.0	1.4	7.5	16.0	13.6	35.1	26.3			
Furniture and refrigerators.....	100.0	1.3	5.4	13.8	21.8	31.5	12.3	13.9		
Gas, illuminating and heating.....	100.0	1.3	3.4	4.3	11.5	8.5			70.9	
Iron and steel, blast furnaces.....	100.0				3.2		36.1	60.7		
Iron and steel, steel works and rolling mills.....	100.0			0.2	1.0	7.0	8.6	14.8	68.3	
Leather goods.....	100.0	8.5	17.4	26.1	18.6	20.1	9.3			
Leather, tanned, curried, and finished.....	100.0	0.2	3.1	4.6	12.2	37.5	20.7	21.8		
Liquors, distilled.....	100.0	0.5		3.9	18.0	77.6				
Liquors, malt.....	100.0	0.9	11.1	26.2	31.2	14.6	16.1			
Lumber and timber products.....	100.0	5.5	12.0	15.0	17.9	20.8	21.0	7.8		
Millinery and lace goods.....	100.0	2.0	13.3	23.3	22.1	21.0	18.4			
Musical instruments, pianos and organs and materials.....	100.0	0.3	2.5	5.4	4.8	22.5	29.6	17.5	17.4	
Paint and varnish.....	100.0	6.1	9.2	26.8	22.0	35.9				
Patent medicines and compounds and druggists' preparations.....	100.0	20.3	20.9	20.2	21.1	17.5				
Printing and publishing.....	100.0	10.3	16.4	15.7	13.2	18.8	11.5	14.2		
Slaughtering and meat packing.....	100.0	0.3	1.0	2.7	3.3	3.0	1.0	6.1	82.0	
Smelting and refining, zinc.....	100.0					14.7	18.0	67.3		
Soap.....	100.0	1.9	1.9	7.5	2.0	14.7	12.2	59.1		
Stoves and furnaces, including gas and oil stoves.....	100.0	1.0	3.4	11.1	13.4	41.1	30.1			
Tobacco manufactures.....	100.0	24.5	26.0	12.3	9.7	10.0		16.6		
All other industries.....	100.0	5.0	11.6	14.7	15.1	22.6	17.2	11.2	2.6	

¹ Less than one-tenth of 1 per cent.

Of the 18,026 establishments reported for all industries, 14 per cent employed no wage earners; 48.8 per cent, from 1 to 5; 19.7 per cent, from 6 to 20; 8.8 per cent, from 21 to 50; 3.9 per cent, from 51 to 100; and 4.8 per cent, over 100. The most numerous single group consists of the 8,801 establishments employing from 1 to 5 wage earners each, and the next of the 3,560 establishments employing from 6 to 20 wage earners each. There were 39 establishments that employed over 1,000 wage earners each, of which 9 were engaged in slaughtering and meat packing, 5 in the making of men's clothing, 5 were steel works and rolling mills, 4 were steam-railroad repair shops, and 4 were agricultural-implement factories. In some industries, such as the bakery industry, the manufacture of butter, cheese, and condensed milk, the flour-mill and gristmill, and the lumber industries, printing and publishing, and tobacco manufactures, the establishments are mostly small, employing no wage earners or less than 6.

Of the total number of wage earners, 95,905, or 20.6 per cent, were in establishments employing over 1,000 each. This group, which employed a larger number of wage earners than any other, was composed

mainly of slaughtering and meat-packing establishments, steel works and rolling mills, men's clothing factories, agricultural-implement factories, steam-railroad repair shops, and foundries and machine shops.

Most of the industries listed in this table but not in the preceding one, namely, the manufacture of agricultural implements, railroad repair shops, steam-railroad car construction shops, the manufacture of clocks and watches and of electrical machinery, the gas and blast-furnace industries, steel works and rolling mills, the manufacture of pianos and organs, the smelting and refining of zinc, and the manufacture of soap, are industries in which comparatively large establishments do most of the business, as appears from the classification according to the number of wage earners.

Expenses.—As stated in the Introduction, the census does not purport to furnish figures that can be used for determining the cost of manufacture and profits. Facts of interest can, however, be brought out concerning the relative importance of the different classes of expenses which make up the total.

The next table shows, for 1909, in percentages, the distribution of expenses among the classes indicated

for all industries combined and for certain important industries separately. The figures on which the percentages are based appear in Table II, page 740.

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries	5.3	15.8	67.0	12.0
Agricultural implements.....	6.0	20.5	56.2	11.3
Automobiles, including bodies and parts.....	6.3	24.4	58.7	10.6
Baking powders and yeast.....	8.5	5.8	54.2	31.6
Boots and shoes, including cutstock and findings.....	4.5	20.3	70.2	5.0
Bread and other bakery products.....	4.4	17.8	69.9	7.9
Brick and tile.....	5.6	52.9	30.1	11.4
Butter, cheese, and condensed milk.....	2.4	5.7	85.5	5.3
Canning and preserving.....	5.5	13.5	71.8	9.3
Carriages and wagons and materials.....	4.3	24.2	64.0	7.4
Cars and general shop construction and repairs by steam-railroad companies.....	4.0	47.4	47.3	1.3
Cars, steam-railroad, not including operations of railroad companies.....	3.9	30.5	59.7	5.9
Clocks and watches, including cases and materials.....	5.3	55.3	29.0	10.5
Clothing, men's, including shirts.....	5.0	20.6	58.3	17.5
Clothing, women's.....	6.0	21.0	61.5	10.9
Coffee and spice, roasting and grinding.....	5.9	2.9	82.4	8.9
Confectionery.....	0.9	12.7	68.4	12.0
Copper, tin, and sheet-iron products.....	5.4	21.3	65.0	8.4
Electrical machinery, apparatus, and supplies.....	3.5	25.7	54.6	11.1
Flour-mill and gristmill products.....	1.6	2.6	93.2	2.4
Foundry and machine-shop products.....	8.7	26.9	51.7	12.7
Furnishing goods, men's.....	0.3	15.1	68.0	10.6
Furniture and refrigerators.....	7.0	32.2	49.7	11.2
Gas, illuminating and heating.....	11.2	21.3	44.6	22.9
Iron and steel, blast furnaces.....	1.4	5.2	90.4	2.9
Iron and steel, steel works and rolling mills.....	3.1	17.2	74.3	4.9
Leather goods.....	6.2	20.5	64.3	9.0
Leather, tanned, curried, and finished.....	1.9	10.7	82.3	5.1
Liquors, distilled.....	0.4	0.9	17.3	81.4
Liquors, malt.....	7.2	14.7	29.8	48.3
Lumber and timber products.....	4.8	22.2	66.3	6.8
Millinery and lace goods.....	10.0	21.5	58.9	9.6
Musical instruments, pianos and organs and materials.....	7.3	30.0	51.8	10.9
Paint and varnish.....	9.2	6.2	72.0	12.6
Patent medicines and compounds and druggists' preparations.....	16.3	7.5	41.1	35.1
Printing and publishing.....	16.7	24.9	53.4	25.0
Slaughtering and meat packing.....	1.7	3.9	91.0	3.5
Smelting and refining, zinc.....	3.7	15.2	77.2	3.9
Soap.....	7.2	5.6	74.1	13.2
Stoves and furnaces, including gas and oil stoves.....	9.7	32.8	42.7	14.8
Tobacco manufactures.....	4.5	23.1	47.2	25.2
All other industries.....	6.4	16.7	67.2	9.7

This table shows that, for all industries combined, 67 per cent of the total expenses were incurred for materials, 21 per cent for services—that is, salaries and wages—and 12 per cent for other purposes. As would be expected, these proportions vary greatly in the different industries. The large percentages shown for "Miscellaneous expenses" for the distillery and brewery industries are due to the inclusion of internal-revenue taxes under this head.

Engines and power.—The next table shows, for all industries combined, the number of engines or other motors, according to their character, employed in generating power (including electric motors operated by purchased current), and their total horsepower at the censuses of 1909, 1904, and 1899. It also shows separately the number and horsepower of electric motors, including those operated by current generated in the manufacturing establishments.

The amount of primary power used in the manufacturing industries of Illinois increased 32.6 per cent

from 1899 to 1904, and 36.6 per cent from 1904 to 1909. The total increase during the decade was 453,724 horsepower, 72.9 per cent of which was in power generated by steam engines. Notwithstanding this large increase in the horsepower of steam engines, their proportion of the total primary power decreased from 90.7 per cent in 1899 to 82.7 per cent in 1909. Power generated by water wheels and the forms of power included under the head of "Other" show a decrease from 1904 to 1909. The more general use of gas engines is shown, the number of such engines reported being 1,755 in 1909, as compared with 1,447 in 1904 and 1,293 in 1899. Their indicated horsepower was 37,025 in 1909, as compared with 12,319 in 1904 and 8,758 in 1899, the increase during the five-year period 1904-1909 being 24,706 horsepower, or a little more than 200 per cent. Rented electric power represented 11.5 per cent of the total primary power in 1909, as compared with 2.2 per cent in 1899, and the amount reported in 1909 was more than nine times as great as in 1899.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.			PER CENT DISTRIBUTION OF HORSEPOWER.		
	1909	1904	1899 ¹	1909	1904	1899 ¹	1909	1904	1899
Primary power, total	30,546	7,888	8,343	1,013,071	741,555	559,347	100.0	100.0	100.0
Owned.....	8,700	7,888	8,343	889,348	688,036	532,251	87.8	92.8	95.2
Steam.....	6,728	6,201	6,787	838,199	651,578	507,471	82.7	87.9	90.7
Gas.....	1,755	1,447	1,293	37,025	12,319	8,758	3.7	1.7	1.6
Water wheels.....	182	194	203	12,178	14,845	11,614	1.2	2.0	2.1
Water motors.....	35	46	(²)	613	185	(²)	(³)	(³)	(³)
Other.....				1,433	9,109	4,408	0.1	1.2	0.8
Rented.....	21,846	(²)	(²)	123,723	53,519	27,096	12.2	7.2	4.8
Electric.....	21,846	(²)	(²)	117,007	41,978	12,471	11.5	5.7	2.2
Other.....				6,716	11,541	14,625	0.7	1.6	2.6
Electric motors	39,278	8,285	1,839	398,621	165,265	49,235	100.0	100.0	100.0
Run by current generated by establishment.....	17,432	8,285	1,839	281,614	123,287	36,764	70.6	74.6	74.7
Run by rented power.....	21,846	(²)	(²)	117,007	41,978	12,471	29.4	25.4	25.3

¹ Includes the neighborhood industries and hand trades, omitted in 1904 and 1909.
² Not reported.
³ Less than one-tenth of 1 per cent.

The use of electric motors for the purpose of applying power by means of current generated within the establishment is also shown to be rapidly becoming more common, the horsepower of such motors having increased from 36,764 in 1899 to 123,287 in 1904 and 281,614 in 1909, representing an increase for the decade of over 650 per cent.

Fuel.—Closely related to the question of kind of power employed is that of the fuel consumed in generating this power, or otherwise used as material in the manufacturing processes. The next table shows, for 1909, the quantity of each kind of fuel used in all industries combined and in selected industries.

INDUSTRY.	An-thra-cite coal (tons).	Bitumi-nous coal (tons).	Coke (tons).	Wood (cords)	Oil, in-cluding gasoline (bar-rels).	Gas (1,000 feet).	INDUSTRY.	An-thra-cite coal (tons).	Bitumi-nous coal (tons).	Coke (tons).	Wood (cords)	Oil, in-cluding gasoline (bar-rels).	Gas (1,000 feet).
All Industries	155,482	14,285,950	3,982,844	125,490	2,831,328	12,645,341	Flour-mill products.....	1,070	109,804	580	1,789	1,753	20,387
Agricultural implements....	800	287,554	38,303	8,643	135,401	2,890	Foundry and machine-shop products.....	0,041	685,292	530,177	13,405	84,109	6,103,956
Automobiles, including bodies and parts.....	7	11,839	101	.....	153	3,190	Furnishing goods, men's.....	33	2,038	.....	.....	12	1,020
Baking powders and yeast.....	.....	19,024	.....	.....	4	4	Furniture and refrigerators.....	443	108,511	460	50	448	5,555
Boots and shoes, including out stock and findings....	94	18,054	14	.....	008	1,307	Gas, illuminating and heating.....	5,551	437,127	253,479	.....	1,520,486	200
Bread and other bakery products.....	13,777	38,675	29,702	40,209	033	58,324	Iron and steel, blast furnaces.....	.....	37,389	2,804,901	950	4,360	.....
Brick and tile.....	3,775	904,310	1,236	20,002	118,752	3,550	Iron and steel, steel works and rolling mills.....	15,311	3,088,782	86,143	4,704	200,003	.....
Butter, cheese, and condensed milk.....	04	111,806	.....	718	711	78	Leather goods.....	217	14,930	121	.....	170	2,741
Canning and preserving....	272	24,891	08	213	375	0,279	Leather, tanned, curried, and finished.....	2,702	50,105	.....	.....	.....	.....
Carriages and wagons and materials.....	037	47,599	3,483	07	0,745	3,122	Liquors, distilled.....	.....	238,278	.....	.....	56	.....
Cars and general shop construction and repairs by steam-railroad companies.....	6,825	602,367	4,025	0,232	50,030	11,197	Liquors, malt.....	2,581	343,470	300	.....	81	1,555
Cars, steam-railroad, not including operations of railroad companies.....	1,967	108,273	51,903	3,190	33,097	5,087	Lumber and timber products.....	1,272	62,128	02	1,855	1,544	10,509
Clocks and watches, including cases and materials....	9	16,540	200	.....	089	20,120	Millinery and lace goods....	104	2,951	65	2	31	5,159
Clothing, men's, including shirts.....	1,848	15,001	51	52	3	51,754	Musical instruments, pianos and organs and materials.....	2,408	83,988	.....	6	403	448
Clothing, women's.....	167	387	.....	1	93	7,436	Paint and varnish.....	378	55,018	3,988	178	2,736	8,729
Coffee and spice, roasting and grinding.....	2,646	9,384	46	50	7	20,019	Patent medicines and compounds and druggists' preparations.....	5,247	15,779	41	4	95	5,123
Confectionery.....	154	28,005	1,558	66	49	20,595	Printing and publishing....	2,317	83,242	200	88	2,741	69,461
Copper, tin, and sheet-iron products.....	1,907	62,707	440	416	1,333	27,490	Slaughtering and meat packing.....	3,609	957,979	600	4,093	1,929	128,593
Electrical machinery, apparatus, and supplies.....	106	71,903	5,720	1	1,100	235,083	Smelting and refining, zinc.....	24,149	378,627	.....	120	.....	.....
							Soap.....	21	113,638	.....	72	13	3,318
							Stoves and furnaces, including gas and oil stoves.....	500	32,978	9,927	856	154	2,604
							Tobacco manufactures.....	3,405	10,417	214	30	22	2,641
							All other industries.....	38,714	4,880,046	04,366	11,320	599,187	5,776,083

NOTE.—In addition, there were 19,567 tons of other varieties of fuel reported.

SUPPLEMENTARY DATA REGARDING IMPORTANT INDUSTRIES.

(With statistics for laundries and custom sawmills and gristmills.)

For certain industries the Census Bureau collects, by means of special schedules, details regarding the quantity and cost of materials and the quantity and value of products and other information for securing which no provision is made on the general schedule. Certain data of this character for 11 important industries in Illinois are here presented.

Slaughtering and meat packing.—This classification includes wholesale slaughtering and meat-packing establishments and establishments engaged in the manufacture of sausage only. The following table gives the quantity and cost of the different materials and the quantity and value of the various products reported at the censuses of 1909, 1904, and 1899:

MATERIAL OR PRODUCT.	1909	1904	1899	MATERIAL OR PRODUCT.	1909	1904	1899
Materials used, total cost.....	\$343,978,007	\$280,591,937	\$247,215,120	Products—Continued.			
Beeves slaughtered:				All other meat sold fresh:			
Number.....	2,181,109	2,643,028	2,067,059	Pounds.....	192,514,645	50,323,948	57,936,888
Cost.....	\$109,990,873	\$110,020,978	\$93,289,643	Value.....	\$11,146,711	\$5,346,938	\$6,159,827
Calves slaughtered:				Canned goods:			
Number.....	513,039	295,928	140,450	Pounds.....	78,155,327	(1)	(1)
Cost.....	\$4,720,200	\$2,097,500	\$1,378,384	Value.....	\$0,977,618	\$10,928,144	\$6,446,283
Sheep slaughtered:				Lard:			
Number.....	3,892,142	3,634,216	3,139,100	Pounds.....	403,177,800	450,577,415	372,162,768
Cost.....	\$19,420,169	\$15,155,386	\$13,558,008	Value.....	\$40,592,051	\$31,463,099	\$22,296,356
Hogs slaughtered:				Tallow, oleo stock, and stearin:			
Number.....	7,293,544	7,854,370	8,201,700	Pounds.....	93,059,600	(1)	(1)
Cost.....	\$107,710,321	\$88,459,645	\$82,070,678	Value.....	\$5,100,877	(1)	(1)
Dressed meat, purchased.....	\$35,679,430	\$18,977,058	\$21,373,008	Oleo oil:			
Fuel and rent of power.....	\$1,485,207	\$1,466,830	\$729,948	Gallons.....	7,938,568	9,143,055	9,760,701
All other materials.....	\$64,954,717	\$44,409,940	\$33,904,061	Value.....	\$6,694,011	\$4,515,283	\$5,907,672
Products, total value.....	\$389,594,906	\$318,201,253	\$288,671,779	Other oils:			
Beef, fresh:				Gallons.....	4,396,960	986,981	4,385,191
Pounds.....	1,142,920,916	1,376,889,532	1,042,234,306	Value.....	\$2,382,423	\$406,239	\$2,010,394
Value.....	\$85,794,478	\$91,960,384	\$74,321,711	Oleomargarine:			
Beef, salted or cured:				Pounds.....	30,793,305	(1)	(1)
Pounds.....	53,965,719	78,334,416	67,017,743	Value.....	\$4,413,678	(1)	(1)
Value.....	\$4,676,501	\$4,931,741	\$6,066,362	Fertilizers and fertilizer materials:			
Veal, fresh:				Tons.....	102,638	191,549	53,614
Pounds.....	51,359,103	30,348,138	17,673,896	Value.....	\$2,614,987	\$3,741,650	\$1,212,519
Value.....	\$4,781,751	\$2,136,480	\$1,489,318	Hides:			
Mutton, fresh:				Number.....	2,408,757	2,766,594	2,206,337
Pounds.....	157,615,125	160,511,123	148,003,635	Pounds.....	135,617,679	165,007,637	128,702,673
Value.....	\$15,051,397	\$12,463,289	\$11,842,741	Value.....	\$19,372,440	\$16,664,648	\$13,092,560
Pork, fresh:				Pelts:			
Pounds.....	303,806,802	260,619,428	411,376,781	Number.....	8,619,577	3,632,161	(1)
Value.....	\$30,221,023	\$18,754,198	\$28,774,485	Value.....	\$3,869,008	\$2,895,359	(1)
Pork, salted or cured:				Wool:			
Pounds.....	720,216,994	885,740,292	935,021,438	Pounds.....	10,888,105	8,653,419	8,389,307
Value.....	\$78,049,000	\$72,754,024	\$73,361,355	Value.....	\$4,523,634	\$2,385,020	\$1,695,473
Sausage, fresh or cured.....	\$14,883,731	\$8,748,970	\$8,631,356	Amount received for custom or contract work.....	\$83,125	\$20,109	\$7,559
				All other products.....	\$45,757,552	\$27,970,172	\$26,116,008

¹ Figures not available.

From 1904 to 1909 there was an increase of 257,926, or 7.1 per cent, in the number of sheep slaughtered and of 217,711, or 73.6 per cent, in the number of calves slaughtered, but a decrease of 461,829, or 17.5 per cent, in the number of beeves slaughtered, and of 560,826, or 7.1 per cent, in the number of hogs slaughtered. These decreases were due in a large measure to a movement of the industry toward the stock-raising states of the West and Southwest, or nearer the source of supply.

The total cost of materials shows an increase in 1909 as compared with 1904 of 22.6 per cent, which was practically the same as the relative increase in total value of products.

The output of fresh, salted, and cured beef decreased 258,337,313 pounds, or 17.8 per cent, from 1904 to 1909; that of fresh mutton, 2,895,998 pounds, or 1.8 per cent; and that of fresh and cured pork, 122,245,924 pounds, or 10.7 per cent; while that of fresh veal increased 21,011,055 pounds, or 69.2 per cent, and that of the meats included under the head of "All other meats sold fresh" shows an increase of 136,190,697 pounds, or 241.8 per cent. The production of lard in 1909 was 53,399,609 pounds, or 11.7 per cent, less than in 1904, although its value shows an increase of \$9,128,952, or 29 per cent. The decrease shown in the amount of oleo oil reported in 1909 as compared with 1904 was due to the fact that some slaughtering and meat-packing establishments, instead of selling the oleo oil which they make as a by-product, now use it in the manufacture of oleomargarine. The increase in the quantity of the oils included under the head of "Other oils" results almost entirely from an increase in the output of lard oil.

Printing and publishing.—The progress of the newspaper and periodical branch of the printing and publishing industry is indicated in the following statement, which shows the number and aggregate circulation per issue of the different classes of publications for the years 1909, 1904, and 1899:

PERIOD OF ISSUE.	NUMBER OF PUBLICATIONS.			AGGREGATE CIRCULATION PER ISSUE.		
	1909	1904	1899	1909	1904	1899
	Total.....	1,682	1,753	1,591	20,823,166	16,542,740	10,429,368
Daily.....	194	192	197	2,323,913	1,954,329	1,449,087
Sunday.....	38	40	43	1,616,506	1,442,721	(1)
Semiweekly and tri-weekly.....	48	59	76	138,165	177,213	176,058
Weekly.....	1,018	1,089	1,000	5,008,590	4,592,043	3,856,953
Monthly.....	289	287	219	9,492,099	6,344,791	3,072,332
Quarterly.....	50	50	23	1,967,558	1,898,000	1,683,434
All other classes.....	45	36	33	276,335	133,643	180,874

1 Included in circulation of dailies.

Illinois ranks second both in number and in circulation of all classes of publications combined; third in number and in circulation of dailies; second in number and in circulation of Sunday papers; first in number and third in circulation of weeklies; and second in number and circulation of monthlies.

The number of dailies and the number of monthlies both show an increase of 2 in 1909 as compared with 1904, and the number of publications included under the head of "All other classes" an increase of 9. The number of quarterlies was the same in both years, while the other three classes show decreases in number. A substantial increase in circulation, on the other hand, is shown for each class except the semiweeklies and triweeklies, while the aggregate circulation reported for all newspapers and periodicals published increased during this period from 16,542,740 to 20,823,166, a gain of 4,280,426, or 25.9 per cent. The increase in the circulation of the different classes of publications was as follows: Dailies, 369,584, or 18.9 per cent; Sunday publications, 173,785, or 12 per cent; weeklies, 416,547, or 9.1 per cent; monthlies, 3,147,308, or 49.6 per cent; and quarterlies, 69,558, or 3.7 per cent. In number and circulation of publications printed in foreign languages Illinois is second among the states, being outranked only by New York, and it leads all the states in number and circulation of newspapers and periodicals printed in the Letto-Slavic languages, having 41, with a total circulation of 342,007.

The following tabular statement gives, for 1909 and 1904, the number and circulation of the different classes of newspapers and periodicals printed, respectively, in English and in a foreign language. Newspapers and periodicals which are printed partly in English and partly in a foreign language are included with those printed entirely in a foreign language.

PERIOD OF ISSUE.	Cen-sus.	TOTAL.		IN ENGLISH.		IN FOREIGN LANGUAGES.	
		Num-ber.	Aggregate circulation per issue.	Num-ber.	Aggregate circulation per issue.	Num-ber.	Aggregate circulation per issue.
Total.....	1909	1,682	20,823,166	1,569	19,395,799	173	1,427,367
	1904	1,753	16,542,740	1,604	15,358,385	149	1,184,355
Daily and Sun-day.	1909	232	3,940,419	201	3,464,425	31	475,994
	1904	232	3,297,050	201	3,002,160	31	294,890
Semiweekly and triweekly.	1909	48	138,165	34	61,965	14	76,200
	1904	59	177,213	49	123,133	10	54,080
Weekly.....	1909	1,018	5,008,590	923	4,448,973	95	559,617
	1904	1,089	4,592,043	1,008	4,048,729	81	543,314
Monthly.....	1909	289	9,492,099	267	9,239,890	22	252,209
	1904	287	6,344,791	271	6,240,866	16	103,925
Quarterly.....	1909	50	1,967,558	44	1,985,266	6	82,292
	1904	50	1,898,000	47	1,850,500	3	47,500
All other classes.	1909	45	276,335	40	265,210	5	11,125
	1904	36	133,643	28	91,667	8	41,976

The publications in foreign languages increased 24 in number between 1904 and 1909, while their circulation increased 273,012, or 23.1 per cent. The monthlies, which increased 6 in number, made the largest absolute and relative increases in circulation. The languages represented correspond more or less closely to the classes of immigrants that have settled in the North Central states. Sixty-three periodicals were published in German; 11 in German and English; 32 in Scandinavian languages, including 1 in Swedish

and English; 18 in Bohemian; 14 in Polish; 8 in Yiddish; 6 in Italian; 3 in Greek; 2 each in Dutch, French, Lithuanian, Slovenian, and Slovak; and 1 each in Bulgarian, Croatian, Servian, Spanish, Esperanto, Yiddish and English, English, German, and Italian, and English, German, and French.

Publications devoted to news, politics, and family reading formed the largest class, numbering 1,169, with a circulation of 5,893,427. Those devoted to general literature, consisting largely of monthly magazines, numbered 36, and had a circulation of 5,582,991; religious periodicals numbered 123, and had a circulation of 3,869,839; fraternal journals numbered 49, and had a circulation of 2,125,069; agricultural journals, 36, with a circulation of 1,115,493; trade journals, 102, with a circulation of 707,096; and scientific and mechanical journals, 26, with a circulation of 508,037. The remaining publications, relating chiefly to commerce, insurance, medicine and surgery, law, education and history, society, art, music, and fashion, numbered 141, and had an aggregate circulation of 1,021,214.

Iron and steel, steel works and rolling mills.—The quantity and cost of the principal materials used by the steel works and rolling mills and the quantity and value of their leading products are shown for 1909, 1904, and 1899 in the following table:

MATERIAL OR PRODUCT.	1909	1904	1899
Materials used, total cost.....	\$56,244,403	\$38,040,762	\$30,021,296
Pig iron and ferroalloys:			
Tons.....	2,433,805	1,446,200	1,410,721
Cost.....	\$30,680,448	\$10,282,069	\$14,137,074
Scrap, including old rails not intended for re-rolling: ¹			
Tons.....	278,874	400,533	461,767
Cost.....	\$3,990,801	\$6,202,302	\$7,312,159
Ingots, blooms, billets, slabs, muck and scrap bar, re-rolling rails, and sheet and tin-plate bars: ¹			
Tons.....	280,727	220,572	121,301
Cost.....	\$6,367,611	\$5,343,045	\$3,270,125
Fuel and rent of power.....	\$3,598,585	\$3,308,450	\$2,433,156
All other materials.....	5,004,028	4,513,800	2,859,782
Products, total value.....	\$86,608,137	\$60,021,925	\$45,149,498
Rolled, forged, and other classified products:			
Tons.....	2,044,191	1,057,885	1,485,340
Value.....	\$78,841,720	\$52,809,666	\$37,000,574
All other products, including value added to rolled products by further manufacture.....	\$7,766,417	\$7,212,259	\$8,082,924
<i>Steel production.</i>			
Total tons.....	2,667,043	1,555,198	1,460,710
Bessemer.....	1,631,164	1,103,548	1,211,115
Open-hearth.....	1,020,208	361,650	240,313
Crucible and miscellaneous.....	15,671	.....	282
Ingots.....	2,592,430	1,400,160	1,421,687
Castings.....	74,613	56,038	39,023

¹ Purchased, or transferred from other works of the company reporting; not including scrap and partially manufactured material consumed in plant where produced.

In using this table it should be borne in mind that the year 1904 was one of partial depression in the iron and steel industry, and hence neither comparatively small increases in quantity and value for 1904 as compared with 1899 nor comparatively large increases for 1909

as compared with 1904 are representative of the normal rate of growth for the industry.

The total cost of the materials consumed in the steel works and rolling mills of the state increased 87.3 per cent from 1899 to 1909. The principal increase was in the most important group of materials, pig iron and ferroalloys, the tonnage of which increased from 1,410,721 to 2,433,805, or 72.5 per cent, accompanied by an increase from \$14,137,074 to \$30,686,448, or 159.5 per cent, in cost. Ingots, blooms, billets, etc., also show a material increase in both tonnage and cost, while scrap shows a large decrease in both respects.

The total value of products increased 91.8 per cent from 1899 to 1909. The total steel production was 2,667,043 tons in 1909, as compared with 1,460,710 tons in 1899, the increase for the decade being 82.6 per cent. The output of all classes of steel increased between 1899 and 1909, but the actual increase in open-hearth steel was particularly striking. Most of the increased steel production was in the form of ingots, the tonnage of which increased from 1,421,687 in 1899 to 2,592,430 in 1909, or 82.3 per cent, while the tonnage of castings increased from 39,023 to 74,613, or 91.2 per cent, during the same period. The leading rolling-mill products in 1909 in the order of total tonnage were rails, bars and rods, wire rods, structural shapes, plates and sheets, and rail fastenings.

Iron and steel, blast furnaces.—The tonnage and value of pig iron produced and the value of all other products in 1909, 1904, and 1899 are shown in the following table:

PRODUCT.	1909	1904	1899
Total value.....	\$38,299,897	\$27,330,836	\$15,153,646
Pig iron:			
Tons.....	2,433,805	1,446,200	1,410,530
Value.....	\$30,680,448	\$10,282,069	\$15,033,695
All other products.....	.....	\$1,822,505	\$110,950
Pig iron, classified by grades (tons):			
Bessemer.....	1,805,718	1,424,030	1,320,287
Basic.....	352,381	52,658	.....
Foundry.....	60,151	105,895	94,008
Forge or mill.....	2,633	1,411	7,500
Malleable Bessemer.....	173,871	31,588	.....
White, mottled, miscellaneous, and direct castings.....	0,803	680	47
Ferroalloys—spiegeleisen, ferromanganese, etc.....	64,125	44,408	47,038

The production of pig iron in the state increased 48.7 per cent in quantity and 50.1 per cent in value from 1904 to 1909, as compared with 13 per cent in quantity and 69.7 per cent in value during the five-year period 1899-1904. Bessemer pig iron formed only 73.1 per cent of the total production in 1909, whereas in 1904 and in 1899 it formed over 85 per cent. All the pig iron produced in Illinois was coke iron. The establishments operating the blast furnaces produced in 1909, 2,152,608 tons for their own use and 316,164 tons for sale.

Agricultural implements.—The following table shows the value of the different classes of agricultural implements manufactured in Illinois in 1909 and 1904 and the total value of products for 1899:

PRODUCT.	1909	1904	1899
Total value.....	\$57,268,325	\$38,412,452	\$42,033,796
Implements of cultivation.....	14,422,970	12,273,939	41,359,006
Seeders and planters.....	5,680,681	2,998,075	
Harvesting implements.....	22,417,070	16,874,413	
Seed separators.....	1,847,026	915,095	
All other products.....	12,523,685	5,107,368	674,790
Amount received for repair work.....	371,893	183,502	

The value of agricultural implements manufactured was \$57,268,325 in 1909, as compared with \$38,412,452 in 1904, an increase for the five years of \$18,855,873, or 49.1 per cent. The production in 1904, however, was abnormally low, owing to an overproduction in 1903, and a comparison of the figures for 1909 with those for 1899, therefore, better indicates the true growth of the industry. Such a comparison shows an increase in value of products for the decade of \$15,234,529, or 36.2 per cent. In both 1909 and 1904 harvesting implements constituted the most important class of products, as measured by value.

Flour-mill and gristmill products.—The manufacture of flour-mill and gristmill products has long been one of the leading industries of Illinois. The following tabular statement gives the quantity and value of the products for 1909, 1904, and 1899:

PRODUCT.	1909	1904	1899
Total value.....	\$51,110,681	\$39,892,127	\$28,576,357
Wheat flour:			
White—			
Barrels.....	6,360,318	5,939,383	5,932,815
Value.....	\$33,858,081	\$27,542,880	\$20,320,387
Graham—			
Barrels.....	26,229	15,207	(¹)
Value.....	\$134,413	\$76,521	(¹)
Corn meal and corn flour:			
Barrels.....	738,864	1,068,286	1,589,178
Value.....	\$2,168,824	\$2,319,104	\$2,361,940
Rye flour:			
Barrels.....	116,925	77,309	59,943
Value.....	\$539,732	\$279,992	\$175,246
Buckwheat flour:			
Pounds.....	1,802,689	2,055,372	3,990,578
Value.....	\$54,842	\$62,210	\$100,652
Barley meal:			
Pounds.....	110,400	1,272,000	1,322,000
Value.....	\$1,560	\$20,220	\$15,792
Hominy and grits:			
Pounds.....	221,177,853	239,728,156	33,701,026
Value.....	\$3,224,171	\$2,551,096	\$263,059
Feed:			
Tons.....	259,543	147,419	204,089
Value.....	\$6,256,207	\$2,636,897	\$2,897,455
Offal:			
Tons.....	216,309	258,992	203,099
Value.....	\$4,510,073	\$4,344,653	\$2,329,450
All other products.....	\$362,778	\$58,554	\$111,376

¹ Not reported separately.

White flour, which is the leading product of the industry in the state, shows an increase between 1904 and 1909 of 420,935 barrels, or 7.1 per cent, in quantity, and of \$6,315,201, or 22.9 per cent, in value, while the output of feed, the second product in importance on the basis of value, increased 112,124 tons, or

76.1 per cent, in quantity, and \$3,619,310, or 137.3 per cent, in value. The output of hominy and grits shows an increase of \$673,075, or 26.4 per cent, in value in 1909 as compared with 1904, but a decrease of 18,550,303 pounds, or 7.7 per cent, in quantity, and that of offal, which consists mainly of bran and middlings, the by-products of the flour mills, an increase of \$165,420, or 3.8 per cent, in value, but a decrease of 42,683 tons, or 16.5 per cent, in quantity. The output of corn meal and corn flour decreased 329,422 barrels, or 30.8 per cent, in quantity, and \$150,280, or 6.5 per cent, in value. The value of products for the industry as a whole shows an increase from \$39,892,127 in 1904 to \$51,110,681 in 1909, or 28.1 per cent.

The following tabular statement classifies the flour mills reported in 1909 and 1904 according to their output for the year:

OUTPUT.	NUMBER OF MILLS.	
	1909	1904
All classes.....	309	302
Less than 1,000 barrels.....	88	48
1,000 barrels but less than 5,000.....	86	106
5,000 barrels but less than 20,000.....	76	89
20,000 barrels but less than 100,000.....	47	47
100,000 barrels and over.....	12	12

The flour mills and gristmills of the state reported in 1909, 3,477 pairs of rolls as compared with 4,008 pairs in 1904 and 3,008 pairs in 1899, and 416 runs of stone and steel burrs, as against 296 in 1904 and 307 in 1899. Fifty-nine establishments manufactured the barrels in which to ship their product in 1909, and 3 manufactured sacks.

Soap.—In the next table the quantity and cost of the principal materials used in making soap and the quantity and value of the chief products are shown.

The quantity of tallow, grease, and other fats used shows a decrease in 1909 as compared with 1904 of 31.1 per cent; that of cottonseed oil, a decrease of 81.3 per cent; and that of caustic soda, a decrease of 21.2 per cent. On the other hand, the quantity of coconut and palm-kernel oil used increased 108.3 per cent; that of foots, 60.1 per cent; and that of soda ash, 61 per cent. The materials included under the head of "All other materials" show an increase of \$5,719,088, or 376.1 per cent, in cost, due largely to the fact that under this head are included the cost of the principal materials used in the manufacture of cottolene, of which a considerable amount was produced in Illinois as a secondary product in 1909 by establishments classified as engaged in the soap industry.

The output of hard soaps, which constitute the most important class of products of the industry, was 55,646,050 pounds, or 28.1 per cent, greater in 1909 than in 1904. Of the total increase of \$6,024,091, or 42.6 per cent, in the value of products for the industry, a little more than two-thirds represented the increase in

the value of hard soaps produced. The quantity of soft soap manufactured in 1909 was more than thirteen times that reported for 1904 and its value more than five times that reported for the earlier year. The quantity of glycerin manufactured in 1909 was nearly double that made in 1904, and its value shows an increase of 130.8 per cent.

MATERIAL OR PRODUCT.	1909	1904
Materials used, total cost.....	\$13,948,160	\$9,345,061
Tallow, grease, and other fats:		
Pounds.....	54,546,522	79,134,570
Cost.....	\$3,225,011	\$3,573,202
Cocunut and palm-kernel oil:		
Gallons.....	2,174,700	1,043,976
Cost.....	\$1,084,613	\$438,044
Cottonseed oil:		
Gallons.....	1,505,800	8,356,680
Cost.....	\$576,024	\$2,515,047
Rosin:		
Pounds.....	18,272,898	18,607,593
Cost.....	\$423,820	\$303,456
Foots:		
Pounds.....	21,403,551	13,307,007
Cost.....	\$511,907	\$250,008
Caustic soda:		
Tons.....	8,022	10,186
Cost.....	\$335,312	\$304,256
Soda ash:		
Tons.....	15,640	9,715
Cost.....	\$288,647	\$148,100
Fuel and rent of power.....	\$262,310	\$225,460
All other materials.....	\$7,239,898	\$1,520,810
Products, total value.....	\$20,180,799	\$14,156,708
Hard soaps:		
Pounds.....	253,620,401	197,983,351
Value.....	\$13,050,220	\$8,671,921
Soft soap:		
Pounds.....	7,554,416	507,153
Value.....	\$200,521	\$39,433
Glycerin:		
Pounds.....	6,768,939	3,721,609
Value.....	\$876,871	\$379,863
All other products ¹	\$6,053,187	\$5,065,491

¹ Includes liquid soap, special soap articles, and cottoleno in 1909.

Musical instruments, pianos and organs and materials.—The following table gives the number and value of the principal products reported by the piano and organ industry for 1909, 1904, and 1899:

PRODUCT.	1909	1904	1899
Total value.....	\$19,176,328	\$13,323,358	\$8,251,930
Pianos:			
Number.....	108,283	74,137	46,134
Value.....	\$14,783,304	\$9,696,142	\$5,691,747
Upright—			
Number.....	107,903	73,890	46,024
Value.....	\$14,646,471	\$9,614,431	\$5,643,287
Without player attachments—			
Number.....	103,433	73,874	46,024
Value.....	\$13,226,811	\$9,005,681	\$5,643,287
For or with player attachments—			
Number.....	4,470	25	.....
Value.....	\$1,419,600	\$3,750	.....
Grand—			
Number.....	380	238	110
Value.....	\$130,923	\$81,711	\$48,400
Player attachments made separate from pianos:			
Number.....	464	2,647	.....
Value.....	\$34,008	\$227,897	.....
Organs:			
Number.....	28,798	55,759	52,394
Value.....	\$1,281,415	\$1,909,543	\$1,773,200
Pipe—			
Number.....	154	140	87
Value.....	\$307,632	\$280,323	\$105,167
Reed—			
Number.....	28,644	55,619	52,307
Value.....	\$973,783	\$1,739,220	\$1,608,043
Parts and materials.....	\$2,785,667	\$858,111	(¹)
All other products.....	\$290,944	\$571,675	\$786,983

¹ Included with "All other products."

Increases occurred during the decade in both the number and the value of all kinds of pianos and organs

manufactured except reed organs, which show decreases in both respects from 1904 to 1909. The player pianos, which increased in number from 25 in 1904 to 4,470 in 1909, are now being manufactured in far greater number than the detached piano players, which decreased in number from 2,647 in 1904 to 464 in 1909. The number of upright pianos manufactured without the player attachment was 73,874 in 1904 and 103,433 in 1909, an increase of 29,559, or 40 per cent, while the value of the output increased 37.7 per cent during this interval. From 1904 to 1909 the number of grand pianos manufactured increased from 238 to 380 and the number of pipe organs from 140 to 154.

Butter, cheese, and condensed milk.—The butter, cheese, and condensed-milk industry, although showing a decrease since 1904 of 110, or 27.2 per cent, in the number of establishments, shows an increase of \$4,521,745, or 34.1 per cent, in the total value of products.

In Illinois, as in most other states where dairying is carried on extensively, the total amount of milk used in this industry has decreased and the total amount of cream has increased. This is due to the fact that a large part of the cream used is now separated on the farms instead of at the factories, and only the cream is sold, instead of the whole milk, as formerly. This decrease in the amount of milk bought by the butter factories has been counteracted to some extent by the rapid growth in the demand on the part of the condensed-milk factories, which necessarily use whole milk. The net result has been a decrease of 12.7 per cent in the amount of milk bought.

The following table gives in detail the quantity and value of the products of the industry for 1909, 1904, and 1899:

PRODUCT.	1909	1904	1899
Total value.....	\$17,798,278	\$13,276,533	\$12,879,299
Butter:			
Packed solid—			
Pounds.....	14,767,503	20,466,055	30,238,567
Value.....	\$4,215,191	\$4,290,377	\$6,103,308
Prints or rolls—			
Pounds.....	9,803,473	6,873,270	3,816,725
Value.....	\$2,873,223	\$1,450,935	\$789,725
Cream sold:			
Pounds.....	11,406,133	2,192,048	9,521,000
Value.....	\$1,274,796	\$179,071	\$609,185
All other butter-factory products ¹	\$257,711	\$230,508	\$361,103
Cheese:			
Full cream—			
Pounds.....	2,919,897	.....	.....
Value.....	\$393,397	.....	.....
Part cream—			
Pounds.....	561,028	5,301,211	9,055,119
Value.....	\$58,005	\$426,026	\$626,984
Other kinds—			
Pounds.....	1,318,310	.....	.....
Value.....	\$64,084	.....	.....
All other cheese-factory products.....	\$6,801	\$3,161	\$16,697
Condensed milk:			
Sweetened—			
Pounds.....	48,240,252	47,611,291	.....
Value.....	\$4,408,085	\$3,410,927	.....
Unsweetened—			
Pounds.....	66,200,496	45,913,761	71,237,449
Value.....	\$3,969,542	\$3,257,807	\$4,368,597
All other condensed-milk factory products.....	\$134,242	.....	\$10,700
All other products.....	\$78,201	\$12,661	.....

¹ Includes skimmed milk sold and caseln.

The quantity of butter produced in factories has shown a marked decrease at each of the last two censuses. In 1899 the quantity produced was 34,055,312 pounds, but by 1909 it had decreased to 24,570,976 pounds, a loss of 9,484,336 pounds, or 27.8 per cent. The value of the output, on the other hand, although it decreased a little between 1899 and 1904, increased during the next five-year period. In 1899 the total value was \$6,891,033, but in 1909 it was \$7,088,414, an increase of \$197,381, or 2.9 per cent, for the decade as a whole. A decrease of 27.8 per cent in quantity has thus been accompanied by an increase of 2.9 per cent in value.

The total value of the cheese-factory products decreased from \$643,681 in 1899 to \$429,187 in 1904 and increased during the following five years to \$527,287. The total output of all kinds of cheese in 1909 amounted to 4,799,235 pounds, representing a decrease of 47 per cent as compared with 1899, when it was 9,055,119 pounds.

There were 15 condensed-milk factories in Illinois in 1904 and 27 in 1909. In 1909 the total value of the condensed-milk product, including both sweetened and unsweetened, formed 48.2 per cent of the state total for the combined industry. For both kinds of condensed milk combined there was an increase from 1899 to 1904 of 31.1 per cent in quantity and of 55.1 per cent in value, while the corresponding gains for the five-year period 1904-1909 were 22.6 per cent and 26.4 per cent, respectively.

Boots and shoes, including cut stock and findings.—The following table shows the number of pairs of the various kinds of footwear manufactured in Illinois during 1909, 1904, and 1899:

KIND.	NUMBER OF PAIRS.		
	1909	1904	1899
Boots and shoes.....	6,893,731	5,736,197	5,669,476
Men's.....	4,018,016	3,483,185	2,975,957
Boys' and youths'.....	1,270,520	601,165	419,839
Women's, misses', and children's.....	1,034,470	887,707	1,552,473
Slippers, all kinds.....	274,697	281,265	213,126
Men's, boys', and youths'.....	112,900	43,089	45,420
Women's, misses', and children's.....	161,797	218,166	167,706
Infants' shoes and slippers.....	1,002,277	(1)	(1)
All other kinds.....	125,100	146,000	179,380

¹ Not reported separately.

The number of pairs of boots and shoes manufactured increased 1,157,534, or 20.2 per cent, between 1904 and 1909, and the number of pairs of slippers, exclusive of infants' slippers, increased 13,432, or 5.1 per cent. Increases in the production of men's and of boys' and youths' boots and shoes are shown for both five-year periods, while decreases are shown for the two five-year periods in the output of misses' and children's boots and shoes. A decrease in the output of women's boots and shoes occurred between 1899 and 1904, but an increase took place between 1904 and 1909. In the latter period there was a decrease of 56,369 pairs, or 25.8 per cent, in the production of women's, misses', and children's slippers, but an

increase of 69,801 pairs, or 162 per cent, in the production of men's, boys', and youths' slippers.

The following table classifies the number of pairs of the various kinds of footwear produced in 1909 according to the method of manufacture:

KIND.	NUMBER OF PAIRS, BY METHOD OF MANUFACTURE.			
	Total	Machine or hand welt.	McKay.	All other methods. ¹
Boots and shoes.....	6,893,731	3,310,544	3,174,420	408,767
Men's.....	4,018,016	3,127,767	630,755	259,494
Boys' and youths'.....	1,270,520	(2)	1,170,688	99,832
Women's, misses', and children's.....	1,034,470	182,777	1,373,977	49,441
Slippers, all kinds.....	274,697	45,540	211,722	17,435
Infants' shoes and slippers.....	1,002,277	448,338	(2)	553,939
All other kinds.....	125,100	(2)	(2)	125,100

¹ Includes wire-screw or metal-fastened, turned, and wooden-pegged.
² Included in "All other methods."

Of the total output of boots and shoes, nearly one-half were made by the machine or hand-welt process and a slightly smaller proportion by the McKay process, the remainder being turned, wooden-pegged, or wire-screw or metal-fastened. The greater part of the men's boots and shoes (77.8 per cent) were made by the machine or hand-welt method, while most of the boys' and youths' boots and shoes (92.1 per cent) and the greater part of the women's, misses', and children's boots and shoes (85.5 per cent) were made by the McKay process.

Leather, tanned, curried, and finished.—The quantity and cost of the principal materials used and the quantity and value of the various products are shown, for 1909, 1904, and 1899, in the following table:

MATERIAL OR PRODUCT.	1909	1904	1899
Materials used, total cost.....	\$12,130,609	\$8,173,788	\$5,764,474
Hides, all kinds:			
Number.....	1,663,928	707,441	748,978
Cost.....	\$3,850,429	\$2,537,379	\$2,294,141
Skins:			
Number.....	4,952,358	4,496,856	2,775,971
Cost.....	\$6,891,454	\$4,571,763	\$2,642,313
Calf and kip—			
Number.....	3,008,616	2,291,546	1,478,882
Cost.....	\$5,532,850	\$3,378,153	\$2,073,564
Sheep—			
Number.....	1,562,628	2,065,943	1,263,323
Cost.....	\$922,466	\$1,075,737	\$556,964
All other—			
Number.....	2,381,114	139,367	33,766
Cost.....	\$426,138	\$117,873	\$11,785
Fuel and rent of power.....	\$151,707	\$76,664	\$73,736
All other materials.....	\$1,228,019	\$987,982	\$774,284
Products, total value.....	\$14,911,782	\$10,758,196	\$7,847,835
Leather:			
Sole, hemlock and chrome—			
Sides.....	109,266	103,198	68,324
Value.....	\$490,442	\$460,000	\$310,296
Upper, other than calf or kip skins—			
Grain, satin, pebble, etc.—			
Sides.....	932,482	364,950	932,186
Value.....	\$3,058,427	\$828,060	\$1,318,546
Finished splits—			
Number.....	613,045	160,800	974,992
Value.....	\$414,160	\$123,000	\$487,075
Horsehides—			
Number.....	101,875	134,893	100,000
Value.....	\$356,760	\$617,604	\$355,000
Calf and kip skins, tanned and finished—			
Number.....	2,926,674	2,293,950	1,455,154
Value.....	\$7,071,221	\$4,741,324	\$3,034,367
Sheepskins—			
Number.....	1,142,669	1,696,713	1,263,323
Value.....	\$716,005	\$964,099	\$540,193
Glove.....	\$586,823	\$707,419	\$185,450
All other.....	\$1,639,736	\$1,664,208	\$1,067,949
All other products.....	\$577,608	\$752,482	\$518,359

¹ Cattle hides only.

² Includes horsehides

This table shows an increase of 48.4 per cent from 1904 to 1909 in the total cost of materials used, as compared with an increase of 41.3 per cent from 1899 to 1904. There was a decrease during each of the five-year periods in the number of hides used, but an increase in their total cost. Large increases are shown for both five-year periods in the number and cost of calf and kip skins treated, while for sheepskins increases are shown for the earlier period only, although both the number and the value of the sheepskins used in 1909 were materially larger than in 1899.

The total value of products increased 38.6 per cent from 1904 to 1909 and 37.1 per cent from 1899 to 1904. Tanned and finished calf and kip skins were the leading products, on the basis of value, at each census, contributing 47.4 per cent of the total value of all the products of the industry in 1909. The value of grain, satin, pebble, and similar upper leathers, the class of products second in importance in this respect, formed only 20.5 per cent of the total value of products in 1909. The relative increase in value from 1904 to 1909 was greater for leather of this class, however, than for any other, amounting to 269.3 per cent. The output shows an increase of 155.5 per cent in 1909 as compared with 1904, although practically the same as in 1899. The greatest relative increase in output for the five-year period 1904-1909 (281.2 per cent), was reported for finished splits of upper leather, which, however, show a decrease of 37.1 per cent in 1909 as compared with 1899. Sheepskins and horsehides increased in number and value from 1899 to 1904 and decreased in both respects from 1904 to 1909, the output of sheepskins in 1909 being somewhat less than in 1899, while that of horsehides was slightly greater.

Laundries.—Statistics for steam laundries are not included in the general tables or in the totals for manufacturing industries. There were 448 such establishments in the state of Illinois, 226 of which were in Chicago, 8 in Rockford, 7 each in Evanston and Peoria, 6 each in Decatur and Springfield, and 5 each in Aurora, Moline, Quincy, and Rock Island. No other incorporated place of 10,000 inhabitants or over had as many as 5 steam laundries.

The following statement summarizes the statistics:

Number of establishments.....	448
Persons engaged in the industry.....	10,916
Proprietors and firm members.....	470
Salaried employees.....	741
Wage earners (average number).....	9,705
Primary horsepower.....	10,780
Capital.....	\$5,540,003
Expenses.....	8,239,441
Services.....	5,035,652
Materials.....	1,721,845
Miscellaneous.....	1,481,944
Amount received for work done.....	10,049,445

Of the total number of wage earners in the industry, 6,601, or 68 per cent, and of the total amount received for work done in the state, \$7,108,126, or 70.7 per cent,

were reported from Chicago. The most common form of ownership was the individual, with 250 establishments. The firm and the corporate forms of ownership were represented by 100 and 98 establishments, respectively. Ninety-nine establishments had receipts for the year's business of less than \$5,000; 209, receipts of \$5,000 but less than \$20,000; 130, receipts of \$20,000 but less than \$100,000; and 10, receipts of \$100,000 but less than \$1,000,000.

The average number of wage earners employed each month and the percentage which this number represented of the greatest number employed in any one month were as follows:

MONTH.	WAGE EARNERS.		MONTH.	WAGE EARNERS.	
	Number.	Per cent of maximum.		Number.	Per cent of maximum.
January.....	9,288	91.6	July.....	10,042	99.0
February.....	9,369	92.4	August.....	10,141	100.0
March.....	9,425	92.0	September.....	10,008	98.7
April.....	9,522	93.0	October.....	9,718	95.8
May.....	9,741	96.1	November.....	9,657	95.2
June.....	9,802	97.2	December.....	9,686	95.5

The different kinds of primary power, the number of engines or motors, and the horsepower used in 1909 are shown in the following tabular statement:

KIND.	Number of engines or motors.	Horsepower.
Primary power, total.....		10,780
Owned:		
Steam.....	304	9,494
Gas.....	23	171
Water wheel.....	1	15
Rented:		
Electric.....	271	1,044
Other.....		56

The kind and quantity of fuel used are shown in the following statement:

KIND.	Unit.	Quantity.
Anthracite coal.....	Tons.....	12,854
Bituminous coal.....	Tons.....	126,068
Coke.....	Tons.....	551
Wood.....	Cords.....	89
Oil.....	Barrels.....	2,172
Gas.....	1,000 feet.....	47,666

Custom sawmills and gristmills.—Statistics for custom sawmills and gristmills are not included in the general tables or in the totals for manufacturing industries, but are presented in the following summary:

	Custom sawmills.	Custom gristmills.
Number of establishments.....	123	157
Persons engaged in the industry.....	305	311
Proprietors and firm members.....	149	206
Salaried employees.....	4	4
Wage earners (average number).....	156	101
Primary horsepower.....	2,244	5,577
Capital.....	\$130,731	\$628,453
Expenses.....	48,190	2,125,560
Services.....	38,784	43,296
Materials.....	2,690	1,202,622
Miscellaneous.....	6,707	20,722
Value of products.....	117,443	1,240,542

¹ Includes estimate of all grain ground. A similar estimate for the value of the lumber sawed by custom sawmills is impracticable.

STATISTICS OF MANUFACTURES.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
STATE—All industries.....	1909	18,026	561,044	17,357	77,923	465,764	1,013,071	\$1,548,171	\$91,449	\$273,319	\$1,160,927	\$1,919,277	\$758,350
	1904	14,321	447,947	13,990	54,521	379,436	741,555	975,845	60,560	208,405	840,057	1,410,342	570,285
	1899	14,374	.....	.....	40,964	332,871	559,347	732,830	40,549	159,104	681,450	1,120,868	439,418
Agricultural implements.....	1909	79	21,511	48	2,223	19,240	38,040	110,605	2,633	11,718	24,824	57,268	32,444
	1904	82	17,331	43	1,929	15,359	34,934	71,383	2,152	8,851	17,751	38,412	20,681
	1899	94	22,731	56	4,444	18,231	30,161	62,202	3,420	9,065	18,800	42,034	23,174
Artificial stone.....	1909	366	1,312	473	54	785	1,111	1,236	39	439	577	1,488	911
	1904	27	142	34	17	91	32	121	11	52	53	158	105
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Automobiles, including bodies and parts.	1909	65	2,804	41	381	2,382	1,786	4,084	426	1,653	3,979	7,154	3,175
	1904	12	192	8	17	167	136	401	28	107	112	357	245
	1899	4	.....	.....	36	303	.....	975	28	218	292	748	456
Babbitt metal and solder.....	1909	19	291	6	102	183	988	1,410	161	109	3,374	4,146	772
	1904	12	200	4	54	142	427	971	61	70	1,916	2,500	584
	1899	9	177	2	40	135	.....	558	58	68	1,292	1,521	289
Bags, other than paper.....	1909	6	213	4	20	189	157	576	24	175	685	965	280
	1904	4	150	2	21	127	112	104	21	47	642	809	167
	1899	4	127	4	17	103	.....	94	11	36	369	547	178
Baking powders and yeast.....	1909	24	1,133	11	465	657	1,189	6,115	509	346	3,261	7,632	4,371
	1904	22	971	21	192	758	1,057	3,868	243	349	1,787	4,541	2,754
	1899	17	612	11	154	447	.....	1,170	229	155	1,288	3,347	2,059
Belting and hose, leather.....	1909	11	403	9	161	233	420	1,279	183	165	1,385	2,188	893
	1904	10	226	6	63	157	212	833	82	96	617	1,055	438
	1899	8	326	2	93	231	.....	640	71	108	893	1,261	466
Bicycles, motorcycles, and parts.....	1909	14	1,005	8	87	910	775	1,276	78	600	973	1,777	804
	1904	13	1,057	6	82	969	2,234	1,030	82	594	513	1,161	648
	1899	60	5,061	31	642	4,388	.....	7,695	522	2,145	4,837	8,960	4,123
Blackening and cleansing and polishing preparations.	1909	58	407	50	121	236	336	517	153	123	569	1,230	661
	1904	38	257	33	49	175	63	219	49	69	358	661	303
	1899	37	203	37	45	121	.....	144	46	43	195	508	313
Boots and shoes, including cut stock and findings.	1909	53	6,392	38	562	5,792	2,770	7,570	700	3,143	10,869	16,755	5,886
	1904	52	4,587	41	297	4,249	1,977	3,945	336	1,991	6,415	9,993	3,578
	1899	63	.....	.....	304	4,790	.....	3,558	347	2,085	7,160	10,499	3,339
Boxes, cigar.....	1909	18	463	17	42	404	296	358	51	158	317	664	347
	1904	17	466	21	29	416	183	253	30	151	252	575	323
	1899	17	398	17	29	352	.....	187	26	111	221	470	249
Boxes, fancy and paper.....	1909	61	4,509	31	393	4,085	4,143	3,813	444	1,501	3,012	6,350	3,338
	1904	50	2,946	35	211	2,700	2,649	2,102	241	954	1,684	3,686	2,002
	1899	44	2,673	35	161	2,477	.....	1,495	160	798	1,453	2,991	1,538
Brass and bronze products.....	1909	79	2,052	56	308	1,688	1,859	4,056	426	1,136	4,148	6,842	2,694
	1904	58	1,932	46	281	1,605	1,231	3,430	289	919	2,372	4,751	2,379
	1899	53	1,436	44	129	1,283	.....	1,472	149	617	1,948	3,276	1,328
Bread and other bakery products.....	1909	2,099	12,566	2,409	1,646	8,611	5,618	24,224	1,347	5,495	21,606	36,118	14,512
	1904	1,406	9,632	1,512	705	7,415	3,795	13,515	591	4,115	14,279	26,145	11,856
	1899	1,064	7,703	1,157	987	5,559	.....	7,294	700	2,567	8,193	15,879	7,686
Brick and tile.....	1909	340	7,347	384	389	6,574	36,013	18,495	466	4,386	2,491	9,765	7,274
	1904	435	6,275	509	303	5,463	28,059	12,988	350	3,052	1,705	7,546	5,841
	1899	566	6,120	688	208	5,224	23,876	9,199	218	2,131	1,026	5,081	4,055
Brooms and brushes.....	1909	119	1,074	124	130	820	503	1,220	137	415	1,389	2,430	1,041
	1904	129	908	129	68	711	621	631	67	334	868	1,687	819
	1899	156	958	162	76	720	.....	501	67	324	711	1,453	742
Butter, cheese, and condensed milk.....	1909	295	3,000	896	372	1,732	6,753	7,820	398	942	14,267	17,798	3,531
	1904	405	2,302	272	295	1,735	6,350	5,322	154	829	10,709	13,277	2,568
	1899	527	2,097	394	220	1,483	6,886	4,466	136	697	10,199	12,879	2,680
Buttons.....	1909	28	623	39	36	548	275	262	31	247	237	676	439
	1904	22	330	30	20	280	220	164	11	102	71	251	180
	1899	14	301	15	14	272	121	53	8	101	66	242	176
Canning and preserving.....	1909	118	2,800	118	304	2,383	4,305	5,630	367	904	4,813	7,620	2,807
	1904	125	2,533	166	221	2,146	2,630	4,007	225	827	4,316	7,044	2,728
	1899	122	.....	.....	313	2,121	.....	2,470	202	641	3,750	5,864	2,114
Carriages and wagons and materials.....	1909	325	6,746	349	545	5,852	9,684	17,859	644	3,588	9,479	16,831	7,352
	1904	324	5,981	361	465	5,155	7,238	12,005	534	2,778	5,746	11,392	5,646
	1899	361	.....	.....	345	4,345	.....	8,880	350	2,114	4,353	9,002	4,649
Cars and general shop construction and repairs by steam-railroad companies.	1909	73	24,406	.....	1,275	23,131	20,740	18,722	1,295	15,288	15,233	32,229	16,996
	1904	99	20,232	.....	1,137	19,095	15,733	13,242	1,062	12,105	12,268	25,491	13,223
	1899	98	14,421	.....	618	13,803	6,979	11,726	569	7,423	8,287	16,580	8,293
Cars and general shop construction and repairs by street-railroad companies.	1909	30	2,364	.....	124	2,240	2,225	3,886	123	1,395	1,807	3,451	1,644
	1904	10	1,035	.....	29	1,006	412	1,082	31	654	418	1,143	725
	1899	12	914	.....	29	885	.....	736	32	509	532	1,116	584
Cars, steam-railroad, not including operations of railroad companies.	1909	28	11,782	2	335	10,945	18,651	37,935	1,002	7,824	15,336	27,001	11,665
	1904	16	9,666	2	628	9,036	14,830	15,467	719	5,931	21,173	30,926	9,753
	1899	17	9,593	.....	279	9,314	10,497	18,732	330	5,361	17,075	24,846	7,771

¹ Not reported separately.
² Excluding statistics for two establishments, to avoid disclosure of individual operations.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaries employed.	Wage earners (average number).							
Expressed in thousands.													
STATE—Continued.													
Cement.....	1900	0	1,530	.....	141	1,305	15,270	\$6,087	\$260	\$855	\$1,619	\$4,088	\$2,489
	1904	0	607	.....	07	540	0,100	2,455	102	328	460	1,178	718
	1899												
Chemicals.....	1900	10	072	.....	2	134	5,907	4,039	181	531	2,896	4,056	1,760
	1904	14	840	.....	2	123	2,874	4,280	180	302	1,355	2,388	928
	1899	20	688	.....	13	90	1,461	2,384	119	309	1,176	2,086	910
Clocks and watches, including cases and materials.	1900	10	5,883	.....	0	209	2,578	12,412	300	3,217	1,688	7,045	5,357
	1904	12	4,240	.....	8	161	1,232	8,039	247	2,357	900	4,999	4,003
	1899	17	3,400	.....	14	116	3,270	7,285	115	1,601	700	2,811	2,105
Clothing, men's, including shirts.....	1900	715	41,122	.....	861	4,109	3,720	38,703	4,404	16,580	45,228	89,473	44,245
	1904	624	25,003	.....	746	2,902	2,176	19,724	3,138	10,215	28,028	57,032	28,976
	1899	938		.....		1,837		14,417	1,943	6,427	10,386	39,086	20,299
Clothing, women's.....	1900	221	7,279	.....	267	861	804	5,567	987	3,152	0,214	16,685	7,421
	1904	191	5,604	.....	256	718	721	3,558	717	2,198	0,393	12,237	5,994
	1899	109	5,179	.....	218	559	578	2,946	003	1,492	5,019	9,775	4,756
Coffee and spice, roasting and grinding..	1900	35	1,792	.....	23	751	2,709	8,752	1,080	525	15,114	19,751	4,637
	1904	25	1,361	.....	22	380	2,010	6,488	473	432	12,483	15,745	3,202
	1899	27	1,484	.....	19	535	930	5,225	504	373	10,007	12,708	2,701
Coffins, burial cases, and undertakers' goods.	1900	21	924	.....	10	182	732	2,080	305	400	982	2,250	1,278
	1904	18	810	.....	11	132	676	1,494	159	345	929	1,867	938
	1899	13	575	.....	10	73	493	681	79	242	725	1,242	517
Confectionery.....	1900	140	4,022	.....	112	711	3,417	6,094	771	1,420	7,665	12,798	5,133
	1904	87	4,115	.....	67	461	3,587	3,704	425	4,202	7,646	3,444	3,444
	1899	64		.....		447	3,079	2,253	348	835	3,703	6,461	2,698
Cooperage and wooden goods, not elsewhere specified.	1900	80	2,017	.....	56	173	2,388	4,453	240	1,127	4,479	6,011	2,122
	1904	110	2,845	.....	110	168	2,567	3,830	208	1,176	4,782	7,088	2,306
	1899	147	3,288	.....	146	123	3,010	2,942	129	1,205	3,890	6,181	2,291
Copper, tin, and sheet-iron products....	1900	483	8,897	.....	508	916	5,510	31,018	1,088	4,315	13,193	22,823	6,390
	1904	283	6,472	.....	305	522	3,086	27,378	707	2,058	8,705	15,385	6,590
	1899	282		.....		310	4,541	5,408	328	2,145	6,191	10,593	4,407
Corsets.....	1900	16	1,668	.....	6	155	1,502	1,300	210	525	1,195	2,711	1,516
	1904	15	1,011	.....	14	36	901	579	36	331	561	1,237	676
	1899	18	1,103	.....	20	48	1,095	532	35	274	463	1,005	542
Cotton goods, including cotton small wares.	1900	5	1,397	.....	78	1,310	2,020	1,070	105	522	1,102	2,111	1,009
	1904	3	548	.....	2	25	521	1,869	27	187	295	613	318
	1899			.....								
Cutlery and tools, not elsewhere specified.	1900	80	1,661	.....	63	205	1,393	2,455	276	700	1,072	2,758	1,686
	1904	59	1,036	.....	56	85	805	1,445	87	410	565	1,515	930
	1899	39	400	.....	37	58	805	742	20	166	156	589	433
Dairymen's, poulterers', and aparlists' supplies.	1900	29	427	.....	30	74	323	859	59	178	575	1,181	606
	1904	24	469	.....	22	78	359	571	53	152	561	1,131	570
	1899			.....								
Electrical machinery, apparatus, and supplies.	1900	143	11,854	.....	55	2,158	9,641	24,202	2,124	6,413	13,628	26,826	12,191
	1904	104	7,808	.....	46	1,031	6,253	21,645	1,407	3,203	7,049	16,700	9,633
	1899	82	7,251	.....	01	1,142	6,048	11,041	638	2,818	4,076	12,169	7,436
Electroplating.....	1900	43	467	.....	40	33	375	200	81	245	226	697	471
	1904	26	324	.....	20	23	272	158	20	155	124	425	301
	1899	30		.....		10	320	87	20	140	56	317	261
Explosives.....	1900	8	327	.....	37	290	1,828	1,562	44	100	935	1,469	534
	1904	5	174	.....	32	142	1,383	775	56	83	412	712	300
	1899	3	85	.....	14	71		404	14	32	144	290	146
Fancy articles, not elsewhere specified..	1900	44	613	.....	32	137	444	659	140	222	574	1,320	746
	1904	39	934	.....	29	120	785	718	137	334	658	1,674	1,016
	1899	44		.....		96	498	370	67	175	425	908	433
Flags, banners, regalia, society badges and emblems.	1900	24	376	.....	18	65	293	388	58	112	313	676	353
	1904	27	369	.....	23	55	281	275	45	102	241	563	322
	1899	12		.....		27	178	128	28	66	141	290	149
Flour-mill and gristmill products.....	1900	461	3,634	.....	544	626	2,464	18,454	805	1,271	45,590	51,111	5,521
	1904	303	3,287	.....	412	465	2,410	14,128	509	1,211	34,930	39,892	4,962
	1899	353		.....		366	1,966	10,714	866	1,030	24,937	28,575	3,638
Foundry and machine-shop products...	1900	1,178	61,303	.....	700	8,337	52,266	143,277	10,721	33,157	63,810	138,579	74,769
	1904	947	48,912	.....	639	5,044	42,620	95,018	7,035	25,425	39,761	94,917	55,156
	1899	940		.....		3,777	39,536	64,051	4,304	20,877	81,987	101,987	43,662
Fur goods.....	1900	63	473	.....	63	91	310	972	109	230	1,071	1,929	858
	1904	36	410	.....	40	44	320	522	68	200	819	1,432	613
	1899	34		.....		82	711	756	77	325	1,261	2,331	1,070
Furnishing goods, men's.....	1900	61	3,116	.....	60	308	2,688	2,881	427	1,015	4,573	7,213	2,640
	1904	36	1,938	.....	45	246	1,647	1,819	179	581	2,470	4,103	1,633
	1899	33	1,944	.....	43	151	1,750	908	133	534	2,096	3,365	1,299
Furniture and refrigerators.....	1900	267	15,240	.....	300	1,365	13,575	22,383	1,755	8,100	12,501	27,900	15,399
	1904	207	13,638	.....	141	1,071	12,426	17,027	1,239	6,714	9,664	22,395	12,731
	1899	166	10,976	.....	128	874	9,974	10,356	801	4,543	6,849	15,623	8,774

1 Not reported separately.

2 Excluding statistics for two establishments, to avoid disclosure of individual operations.

3 Figures can not be shown without disclosing individual operations.

4 Excluding statistics for one establishment, to avoid disclosure of individual operations.

STATISTICS OF MANUFACTURES.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
STATE—Continued.													
Gas and electric fixtures and lamps and reflectors.	1909	78	2,619	41	488	2,090	1,883	\$3,657	\$667	\$1,184	\$2,694	\$5,797	\$3,103
	1904	44	1,386	34	198	1,154	793	1,736	219	640	1,194	2,905	1,711
	1899	56	855	50	171	634	.....	800	154	323	688	1,707	1,019
Gas, illuminating and heating.....	1909	78	8,020	2	1,717	6,301	18,385	131,790	1,507	2,967	6,210	21,052	14,842
	1904	64	4,069	10	1,095	2,904	5,700	97,119	1,344	1,695	4,519	16,008	11,489
	1899	53	3,198	.....	827	2,371	.....	76,816	770	1,306	1,991	8,774	6,783
Glass.....	1909	11	3,686	3	176	3,507	6,638	7,738	231	2,182	1,541	5,047	3,506
	1904	13	4,895	8	119	4,768	1,583	3,576	151	3,012	1,400	5,620	4,220
	1899	6	3,380	1	75	3,304	700	2,182	110	1,621	674	2,834	2,160
Gloves and mittens, leather.....	1909	29	1,463	33	121	1,309	657	1,093	169	519	1,478	2,522	1,045
	1904	24	1,229	30	65	1,134	550	555	63	425	852	1,691	839
	1899	25	1,910	23	108	1,779	159	791	94	660	1,234	2,484	1,250
Grease and tallow.....	1909	36	959	30	151	778	2,842	2,852	224	531	4,065	5,590	1,525
	1904	24	708	22	90	596	1,124	1,207	105	390	1,488	2,438	950
	1899	22	385	25	59	301	.....	673	53	175	1,639	2,030	391
Hats and caps, other than felt, straw, and wool.	1909	38	574	48	63	463	61	280	64	267	479	1,046	567
	1904	35	510	51	23	436	39	175	17	253	536	1,027	491
	1899	48	521	48	44	429	.....	321	37	214	479	962	473
Hosiery and knit goods.....	1909	43	3,141	40	188	2,913	3,452	5,116	221	1,116	3,232	5,947	2,715
	1904	38	2,446	38	66	2,342	1,336	2,903	97	782	2,165	3,730	1,565
	1899	27	1,896	18	46	1,832	815	1,550	67	507	1,286	2,205	919
Ice, manufactured.....	1909	83	1,013	25	184	804	13,288	5,575	192	534	442	1,923	1,486
	1904	43	648	29	134	485	6,509	2,162	110	269	247	940	633
	1899	29	738	22	92	624	4,083	1,689	75	303	174	991	817
Iron and steel, blast furnaces.....	1909	6	2,927	.....	434	2,493	70,453	52,390	496	1,793	30,908	38,300	7,992
	1904	4	1,993	.....	83	1,910	45,487	14,263	101	1,398	19,005	27,331	8,326
	1899	4	3,220	.....	210	3,010	35,520	10,684	295	2,176	11,708	15,154	3,446
Iron and steel, steel works and rolling mills.	1909	24	19,437	3	1,850	17,584	152,470	69,682	2,295	12,962	56,244	86,608	30,364
	1904	23	17,718	3	1,267	16,448	111,308	44,276	1,684	10,071	38,650	60,022	21,572
	1899	22	14,205	3	570	13,632	77,616	32,592	632	7,464	30,021	45,149	15,128
Jewelry.....	1909	67	1,280	69	221	990	367	1,823	210	656	1,264	2,780	1,516
	1904	43	899	51	135	713	189	827	124	456	801	1,755	854
	1899	31	597	37	76	484	.....	764	82	341	802	1,601	799
Leather goods.....	1909	168	3,569	172	448	2,949	2,200	5,360	498	1,633	5,135	8,948	3,813
	1904	155	3,164	163	346	2,655	1,115	3,783	364	1,416	3,437	6,715	3,278
	1899	143	.....	.....	271	2,642	.....	2,806	268	1,153	2,787	5,205	2,418
Leather, tanned, curried, and finished..	1909	29	3,194	26	167	3,001	6,769	15,975	277	1,582	12,131	14,912	2,781
	1904	28	2,887	20	97	2,770	5,260	11,649	135	1,326	8,174	10,758	2,584
	1899	27	2,373	24	86	2,263	3,305	4,761	177	1,145	5,784	7,848	2,064
Limc.....	1909	16	572	12	49	511	794	1,258	64	283	174	688	514
	1904	20	1,121	12	75	1,034	1,312	2,955	100	533	413	1,660	1,247
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Liquors, distilled.....	1909	9	851	1	100	750	3,908	7,500	201	479	9,209	55,200	45,991
	1904	11	762	3	67	692	4,655	5,456	131	407	6,406	54,102	47,696
	1899	20	402	6	58	338	.....	3,165	105	192	3,735	38,208	34,473
Liquors, malt.....	1909	106	5,361	25	938	4,398	27,900	56,141	1,699	3,473	7,033	28,449	21,416
	1904	116	4,861	51	777	4,033	26,012	39,003	1,409	3,004	5,271	23,787	18,516
	1899	94	3,894	47	578	3,269	17,511	32,798	1,041	2,060	4,036	19,734	15,688
Lumber and timber products.....	1909	814	19,025	825	1,633	16,567	52,015	29,778	1,961	9,110	27,264	44,952	17,688
	1904	591	16,909	611	1,172	15,126	44,347	21,651	1,303	7,424	15,222	32,741	14,519
	1899	706	.....	.....	683	11,869	.....	13,400	645	5,178	13,035	23,190	10,155
Marble and stone work.....	1909	278	2,821	324	271	2,226	5,003	4,689	369	1,766	3,030	6,771	3,741
	1904	176	2,431	212	179	2,040	3,422	3,252	244	1,435	2,140	5,392	3,252
	1899	200	.....	.....	222	2,044	.....	3,674	223	1,161	1,643	4,022	2,379
Mattresses and spring beds.....	1909	86	1,036	85	120	831	849	1,151	160	448	1,634	2,860	1,226
	1904	59	1,048	64	98	886	699	985	104	389	1,210	2,117	907
	1899	02	.....	.....	92	692	.....	646	70	314	792	1,651	859
Millinery and lace goods.....	1909	103	3,987	105	554	3,328	549	2,189	645	1,384	3,797	7,282	3,485
	1904	47	3,145	47	298	2,800	398	1,321	278	1,097	2,394	4,948	2,554
	1899	26	1,692	27	148	1,517	.....	516	135	396	1,042	2,103	1,061
Mirrors.....	1909	10	396	4	39	353	370	447	40	232	635	1,106	471
	1904	16	572	9	69	494	640	791	86	265	702	1,408	706
	1899	9	351	4	47	300	.....	430	50	145	568	900	332
Models and patterns, not including paper patterns.	1909	81	585	92	67	426	701	521	79	308	203	889	686
	1904	60	407	64	31	312	277	290	32	216	82	539	457
	1899	60	348	69	8	271	.....	252	7	158	69	375	306
Musical instruments and materials, not specified.	1909	30	425	35	54	336	208	512	57	201	178	629	451
	1904	28	559	27	41	491	255	641	51	302	207	674	467
	1899	27	479	25	24	430	.....	350	20	216	168	514	346
Musical instruments, pianos and organs and materials.	1909	68	9,628	18	833	8,777	8,122	27,719	1,215	5,009	8,642	19,176	10,534
	1904	56	8,265	18	739	7,508	6,809	10,471	886	3,932	5,398	13,323	7,925
	1899	45	5,092	33	389	4,670	4,424	11,166	486	2,392	3,323	8,156	4,833

¹ Excluding statistics for two establishments, to avoid disclosure of individual operations.
² Excluding statistics for one establishment, to avoid disclosure of individual operations.
³ Not reported separately.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

THE STATE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
STATE—Continued.													
Paint and varnish.....	1909	74	2,006	31	1,083	1,792	7,108	\$15,725	\$1,657	\$1,114	\$12,002	\$20,494	\$7,532
	1904	63	1,079	10	684	1,276	5,068	11,340	987	771	8,656	13,325	4,669
	1899	52	1,425	18	518	889	3,231	5,733	703	473	5,653	8,178	2,625
Paper and wood pulp.....	1909	10	1,542	3	142	1,397	15,169	8,400	200	727	3,099	4,983	1,884
	1904	10	1,036	4	73	959	12,818	3,093	120	462	1,416	2,443	1,027
	1899	15	664	6	35	623	9,551	1,555	37	250	798	1,432	634
Paper goods, not elsewhere specified....	1909	46	1,659	27	315	1,317	869	2,260	331	546	1,997	3,779	1,782
	1904	47	1,095	20	131	935	412	933	130	330	745	1,632	887
	1899	21	638	18	57	563	.....	510	68	172	632	1,032	400
Patent medicines and compounds and druggists' preparations.	1909	359	3,902	249	1,784	1,869	3,234	7,080	1,756	805	4,413	13,114	8,701
	1904	312	3,428	237	1,323	1,868	1,645	7,002	1,208	818	3,438	13,320	9,882
	1899	256	2,348	221	823	1,304	.....	3,364	706	502	2,025	6,542	4,517
Photographic apparatus and materials.	1909	13	356	8	64	284	430	708	81	157	318	740	422
	1904	20	481	13	201	267	207	484	156	127	287	811	524
	1899	24	331	24	54	253	.....	254	35	113	194	638	444
Photo-engraving.....	1909	27	1,561	8	430	1,114	606	1,891	475	940	534	2,878	2,144
	1904	21	834	9	229	590	434	605	240	519	259	1,365	1,106
	1899	20	834	8	165	661	.....	359	171	449	155	1,061	906
Pottery, terra-cotta, and fire-clay products.	1909	89	3,474	23	204	3,157	7,995	14,901	383	1,885	1,126	4,615	3,489
	1904	45	2,710	34	260	2,416	5,915	6,008	329	1,244	3,256	2,524	2,524
	1899	53	2,199	41	153	2,005	4,980	3,512	201	841	576	2,144	1,568
Printing and publishing.....	1909	2,608	45,074	2,384	12,046	28,044	20,975	60,084	12,372	18,437	24,680	87,247	62,567
	1904	2,414	32,000	2,232	7,850	22,818	17,677	41,380	7,738	13,883	17,034	62,292	45,258
	1899	2,150	27,475	2,120	5,078	20,277	.....	28,125	4,537	9,873	11,211	43,327	32,116
Pumps, not including steam pumps.....	1909	14	348	7	59	282	328	664	68	179	328	659	331
	1904	15	323	8	44	271	502	709	56	170	208	603	395
	1899	5	190	2	27	161	.....	378	28	62	100	225	116
Scales and balances.....	1909	13	306	7	51	246	293	515	65	151	245	574	329
	1904	9	136	3	23	110	82	274	23	57	98	305	207
	1899	9	149	7	19	123	.....	214	20	71	89	308	219
Sewing machines, cases, and attachments.	1909	7	2,073	1	359	1,713	2,366	4,430	205	1,114	1,110	3,622	2,512
	1904	19	1,645	5	250	1,390	1,840	3,593	257	803	1,058	2,711	1,633
	1899	14	1,062	3	187	1,522	1,048	2,190	170	820	2,018	3,485	1,467
Shipbuilding, including boat building..	1909	23	470	24	33	413	1,113	2,061	34	252	199	584	385
	1904	21	322	20	14	288	1,191	1,094	17	179	118	414	296
	1899	17	343	19	13	311	221	363	47	159	83	522	239
Show cases.....	1909	16	442	18	38	380	419	539	56	248	200	329	539
	1904	10	498	17	42	430	534	398	44	252	350	848	489
	1899	17	398	19	21	358	.....	250	20	101	290	631	392
Slaughtering and meat packing.....	1909	109	32,642	93	5,844	26,795	56,651	131,020	6,440	14,602	348,976	389,595	45,619
	1904	95	32,850	98	5,646	27,111	39,400	80,733	6,571	14,658	280,592	318,201	37,699
	1899	78	.....	.....	4,236	27,991	.....	71,394	3,432	14,115	247,215	288,672	41,437
Smelting and refining, zinc.....	1909	5	2,084	2	110	1,922	7,485	7,606	313	1,275	6,496	9,004	2,608
	1904	5	1,717	.....	74	1,643	5,187	2,870	140	884	3,900	5,428	1,526
	1899	5	1,631	.....	80	1,551	.....	3,180	222	750	4,417	5,883	1,466
Smelting and refining, not from theore..	1909	11	423	4	50	369	1,763	1,603	108	207	3,234	3,930	696
	1904	9	274	3	21	250	1,642	1,479	42	125	1,556	1,976	380
	1899	6	50	5	6	39	.....	58	7	24	213	290	83
Soap.....	1909	34	3,408	20	1,200	2,188	5,155	11,604	1,356	1,053	13,048	20,181	9,233
	1904	34	2,497	24	508	1,995	3,519	7,004	640	887	9,345	14,157	4,812
	1899	39	1,987	38	393	1,550	.....	6,529	453	560	6,033	9,436	3,408
Stereotyping and electrotyping.....	1909	21	747	13	142	692	725	777	187	472	316	1,282	666
	1904	20	812	8	119	685	506	606	139	547	229	1,205	976
	1899	15	515	9	51	455	.....	344	68	200	94	673	579
Stoves and furnaces, including gas and oil stoves.	1909	71	5,223	28	696	4,499	4,983	9,863	876	2,057	3,856	10,287	6,431
	1904	60	4,350	25	417	3,908	4,023	7,543	520	2,358	2,815	7,867	5,062
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Surgical appliances and artificial limbs.	1909	29	820	19	265	530	595	1,074	372	285	921	2,999	1,179
	1904	29	560	20	107	433	239	615	149	178	411	1,010	599
	1899	27	289	20	77	192	.....	234	105	87	170	525	335
Tobacco manufactures.....	1909	1,044	10,707	2,127	546	3,034	878	12,794	818	4,216	8,603	21,870	13,267
	1904	1,825	9,874	2,032	371	7,471	618	9,102	315	3,738	5,995	16,662	10,067
	1899	1,519	7,856	1,658	306	5,892	.....	4,109	315	2,070	4,189	11,909	7,720
Type founding and printing materials..	1909	19	588	9	141	438	391	1,882	201	303	375	1,248	873
	1904	17	574	15	127	432	314	2,111	139	293	321	1,168	847
	1899	10	583	4	80	443	.....	565	91	246	360	1,267	897
Wall paper.....	1909	5	389	2	97	290	492	1,140	120	173	702	1,307	665
	1904	7	320	.....	54	266	491	851	76	139	666	1,094	428
	1899	3	.....	.....	38	146	.....	222	32	84	271	532	261
Woolen, worsted, and felt goods, and wool hats.	1909	9	543	6	38	499	1,342	1,093	75	237	773	1,314	541
	1904	29	491	8	37	446	1,150	1,030	53	162	495	783	288
	1899	213	747	4	50	693	1,229	1,572	69	210	492	933	441
All other industries.....	1909	1,751	51,450	1,360	8,830	41,270	107,835	191,102	11,011	23,535	144,690	223,763	78,773
	1904	1,445	41,373	1,243	6,215	33,915	90,453	99,944	6,639	18,028	101,285	150,137	48,852
	1899	1,481	.....	.....	3,735	29,996	.....	106,212	3,927	13,373	83,144	127,440	44,296

¹ Excluding statistics for two establishments, to avoid disclosure of individual operations.

² Excluding statistics for one establishment, to avoid disclosure of individual operations.

³ Not reported separately.

STATISTICS OF MANUFACTURES.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
CHICAGO—All industries	1909	9,656	356,954	8,156	54,821	293,977	525,236	\$971,841	\$85,925	\$174,112	\$793,470	\$1,281,171	\$487,701
	1904	8,159	289,529	7,289	40,276	241,984	.....	637,743	45,601	136,405	589,914	955,036	365,182
	1899	7,668	.....	.....	32,406	221,191	.....	511,249	32,068	108,727	502,222	797,879	295,657
Artificial stone.....	1909	19	192	20	22	150	82	240	21	104	146	356	210
	1904	3	18	3	3	12	.....	8	2	8	5	19	14
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Automobiles, including bodies and parts.	1909	41	1,725	17	248	1,460	734	2,094	305	1,131	1,707	3,940	2,233
	1904	11	190	7	17	166	.....	399	28	106	111	354	243
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bags, other than paper.....	1909	6	213	4	20	189	157	576	24	175	685	965	280
	1904	4	150	2	21	127	.....	104	21	47	642	809	167
	1899	4	127	4	17	106	.....	94	11	36	369	547	178
Baking powders and yeast.....	1909	16	940	8	410	522	1,142	5,873	447	304	2,888	7,009	4,121
	1904	16	804	14	145	645	.....	3,718	200	317	1,481	3,890	2,409
	1899	14	603	7	154	442	.....	1,163	229	153	1,284	3,336	2,052
Baskets, and rattan and willow ware...	1909	10	52	11	.....	41	16	29	.....	26	34	81	47
	1904	10	68	11	1	56	.....	31	2	27	30	89	59
	1899	8	.....	.....	6	51	.....	49	4	28	21	70	49
Baiting and hose, leather.....	1909	11	403	9	161	233	430	1,279	183	165	1,385	2,188	803
	1904	10	226	6	63	157	.....	833	82	96	617	1,055	438
	1899	8	326	2	93	231	.....	640	71	108	893	1,361	468
Boots and shoes, including cut stock and findings.	1909	31	3,326	29	270	3,027	1,103	3,881	325	1,920	6,045	9,855	3,810
	1904	35	2,651	33	172	2,446	.....	2,311	208	1,311	4,138	6,559	2,421
	1899	45	3,245	51	202	2,992	.....	1,788	239	1,431	4,422	6,814	2,392
Boxes, cigar.....	1909	9	348	9	35	304	214	292	46	125	258	541	283
	1904	10	380	10	26	344	.....	188	28	130	198	478	280
	1899	9	327	7	28	292	.....	153	26	94	204	399	195
Boxes, fancy and paper.....	1909	48	3,984	22	353	3,609	1,575	3,118	400	1,311	2,232	5,044	2,812
	1904	39	2,541	24	193	2,324	.....	1,557	809	809	1,324	2,825	1,561
	1899	38	2,565	25	159	2,381	.....	1,455	158	771	1,427	2,923	1,496
Brass and bronze products.....	1909	56	1,430	38	225	1,167	1,099	2,492	304	810	3,266	5,121	1,865
	1904	43	1,092	37	166	889	.....	1,940	195	534	1,825	3,185	1,370
	1899	44	923	38	97	788	.....	944	114	421	1,688	2,703	1,015
Bread and other bakery products.....	1909	1,177	8,842	1,246	1,169	6,347	3,847	20,600	1,148	4,146	16,280	26,908	10,628
	1904	852	7,216	888	532	5,795	.....	11,191	499	3,240	11,132	20,654	9,522
	1899	710	6,007	746	838	4,423	.....	5,940	631	2,051	6,560	12,763	6,263
Brick and tile.....	1909	7	657	6	39	612	3,225	2,210	62	559	210	1,172	962
	1904	26	853	3	70	780	.....	3,364	121	585	309	1,573	1,264
	1899	22	441	34	18	389	.....	923	23	187	77	434	357
Brooms and brushes.....	1909	56	616	60	59	497	263	690	66	281	918	1,560	642
	1904	62	489	61	33	395	.....	342	35	205	530	1,043	518
	1899	67	506	71	27	408	.....	291	29	199	422	865	443
Buttons.....	1909	13	231	14	27	190	39	151	26	72	139	335	196
	1904	11	68	17	4	47	.....	27	2	16	22	71	49
	1899	7	70	8	3	59	.....	22	1	24	30	82	52
Calcium lights.....	1909	3	12	1	4	7	10	29	4	5	19	27	8
	1904	3	14	1	6	7	.....	7	5	5	6	24	18
	1899	3	12	1	4	7	.....	15	4	4	9	34	25
Canning and preserving.....	1909	47	1,107	41	162	904	1,274	2,058	203	395	2,533	3,827	1,264
	1904	50	1,208	54	144	1,010	.....	2,124	153	440	2,398	3,882	1,484
	1899	49	.....	.....	240	914	.....	1,187	151	322	2,323	3,545	1,222
Carpets, rag.....	1909	25	205	24	18	163	73	87	14	68	43	206	163
	1904	39	219	42	12	165	.....	128	10	84	32	212	180
	1899	52	284	61	10	213	.....	59	7	90	28	204	176
Carriages and wagons and materials.....	1909	126	2,263	139	159	1,965	3,022	7,616	194	1,253	2,602	5,203	2,601
	1904	122	2,108	138	141	1,829	.....	4,496	200	1,093	1,812	4,076	2,264
	1899	97	.....	.....	99	1,569	.....	3,406	111	839	1,355	3,036	1,681
Cars and general shop construction and repairs by steam-railroad companies.	1909	22	11,562	.....	503	11,059	7,232	9,558	567	7,305	7,310	15,359	8,049
	1904	22	9,032	.....	490	8,592	.....	7,582	455	5,792	4,993	11,172	6,179
	1899	24	7,094	.....	307	6,787	.....	6,779	301	3,708	4,030	8,185	4,155
Cars and general shop construction and repairs by street-railroad companies.	1909	7	1,721	.....	57	1,664	1,584	3,061	64	1,069	1,520	2,758	1,238
	1904	8	1,011	.....	26	985	.....	1,061	27	641	403	1,110	707
	1899	9	890	.....	24	866	.....	705	25	497	517	1,076	559
Cars, steam-railroad, not including operations of railroad companies.	1909	18	9,226	.....	673	8,553	14,576	29,730	787	6,387	11,620	20,892	9,272
	1904	11	7,606	.....	547	7,059	.....	11,635	621	4,897	15,761	23,799	8,038
	1899	13	7,800	.....	211	7,589	.....	14,482	240	4,474	13,097	19,108	6,011
Chemicals.....	1909	10	218	2	73	143	780	887	92	92	598	1,149	551
	1904	8	445	2	92	351	.....	2,974	151	223	1,026	1,724	698
	1899	13	457	9	51	397	.....	1,491	63	223	746	1,382	636
Clocks and watches, including cases and materials.	1909	5	145	3	33	109	26	421	44	60	282	445	163
	1904	3	58	2	11	45	.....	39	14	32	34	147	113
	1899	6	77	6	17	54	.....	78	11	27	40	111	71

¹ Not reported separately.

² Excluding statistics for two establishments, to avoid disclosure of individual operations.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employeos.	Wage earners (average number).							
Expressed in thousands.													
CHICAGO—Continued.													
Cloth, sponging and refinishing.....	1909	6	106	4	11	91	36	\$31	\$13	\$52	\$1	\$119	\$118
	1904	5	73	4	5	64	.....	10	7	47	3	90	87
	1899	5	64	4	6	54	.....	13	7	29	2	55	53
Clothing, men's, including shirts.....	1909	678	38,370	830	3,925	33,615	2,916	36,521	4,292	15,777	42,768	85,296	42,528
	1904	593	23,163	723	2,785	19,655	.....	18,512	2,975	9,706	26,055	54,626	27,971
	1899	905	.....	.....	1,710	15,019	.....	13,527	1,827	5,957	18,447	37,847	19,400
Clothing, women's.....	1909	204	6,066	254	797	5,615	698	5,193	915	2,997	8,658	15,677	7,019
	1904	174	5,217	239	670	4,308	.....	3,304	680	2,083	6,011	11,637	5,626
	1899	151	4,708	197	523	3,988	.....	2,793	575	1,400	4,685	9,208	4,523
Coffee and spice, roasting and grinding..	1909	32	1,775	22	747	1,006	2,575	8,696	1,078	521	14,069	19,693	4,624
	1904	23	1,341	21	380	940	.....	6,440	467	425	12,310	15,563	3,244
	1899	25	1,474	19	533	922	.....	5,196	593	369	9,937	12,612	2,675
Coffins, burial cases, and undertakers' goods.	1909	13	733	5	152	576	328	1,721	270	339	764	1,838	1,074
	1904	10	576	8	97	471	.....	986	117	236	632	1,267	665
	1899	8	453	9	58	386	.....	473	61	207	610	1,005	395
Confectionery.....	1909	87	3,865	53	571	3,241	3,045	5,275	938	1,250	6,703	11,222	4,519
	1904	62	3,378	44	381	2,953	.....	3,143	362	1,018	3,594	6,550	2,956
	1899	51	.....	406	406	2,586	.....	1,971	320	713	3,332	5,718	2,386
Cooperage and wooden goods, not elsewhere specified.	1909	37	1,269	32	71	1,166	1,084	1,860	110	601	2,188	3,368	1,180
	1904	34	1,430	61	89	1,280	.....	1,591	161	623	2,135	3,406	1,271
	1899	37	1,474	64	60	1,341	.....	1,240	63	555	1,850	2,912	1,062
Copper, tin, and sheet-iron products....	1909	268	4,610	250	405	3,859	2,859	12,216	659	2,472	6,463	12,242	5,779
	1904	170	3,885	167	371	3,347	.....	8,712	510	1,933	3,957	8,137	4,180
	1899	161	.....	233	233	3,066	.....	4,382	270	1,741	4,952	8,425	3,473
Corsets.....	1909	10	1,124	5	114	1,005	120	925	150	340	705	1,779	1,074
	1904	11	472	12	22	438	.....	179	26	175	192	559	357
	1899	15	370	17	24	329	.....	172	20	83	161	395	234
Cutlery and tools, not elsewhere specified	1909	53	1,167	43	142	982	1,499	1,796	200	554	680	1,895	1,215
	1904	37	721	37	45	639	.....	946	50	288	348	946	538
	1899	24	228	22	31	175	.....	518	13	87	86	278	192
Dairymen's, poulterers', and apiarists' supplies.	1909	7	70	5	16	49	79	179	21	37	147	340	193
	1904	5	30	4	14	18	.....	90	12	10	199	271	72
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dentists' materials.....	1909	10	85	5	32	48	36	72	28	30	115	232	117
	1904	8	98	7	13	78	.....	100	12	36	24	115	91
	1899	9	123	9	8	106	.....	148	9	40	71	178	102
Electrical machinery, apparatus, and supplies.	1909	123	7,333	45	1,192	6,096	6,443	10,624	1,370	3,860	11,405	20,689	9,264
	1904	96	7,504	38	1,590	5,927	.....	21,271	1,367	3,999	7,501	16,292	8,761
	1899	71	6,961	51	1,113	5,787	.....	11,216	611	2,711	4,283	11,358	7,075
Electroplating.....	1909	34	374	40	24	310	422	181	25	214	107	484	377
	1904	23	282	27	21	234	.....	101	19	142	54	327	273
	1899	26	.....	19	19	301	.....	75	20	134	53	302	249
Fancy articles, not elsewhere specified..	1909	40	603	29	136	438	210	641	139	218	568	1,289	721
	1904	38	929	28	120	781	.....	711	137	312	656	1,604	1,008
	1899	39	.....	79	79	376	.....	281	52	152	365	791	426
Fire extinguishers, chemical.....	1909	5	54	2	24	28	11	110	56	15	62	164	102
	1904	4	23	3	2	18	.....	10	4	14	25	56	31
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foundry and machine-shop products....	1909	669	36,868	338	5,475	31,085	54,376	90,050	7,308	20,400	40,755	89,669	48,914
	1904	582	33,378	340	4,237	28,792	.....	68,558	5,407	17,772	28,558	68,491	39,633
	1899	593	20,130	450	2,663	26,017	.....	45,300	3,116	14,206	26,883	57,721	30,638
Fur goods.....	1909	50	455	58	80	308	59	959	108	225	1,060	1,903	843
	1904	34	399	38	43	318	.....	514	67	198	316	1,421	605
	1899	33	.....	82	82	706	.....	748	77	322	1,257	2,319	1,062
Furnishing goods, men's.....	1909	38	2,273	38	330	1,005	562	2,340	383	820	3,377	6,122	2,245
	1904	31	1,542	41	219	1,282	.....	1,618	157	488	2,131	3,593	1,372
	1899	30	1,932	40	148	1,744	.....	986	130	531	2,045	3,335	1,290
Furniture and refrigerators.....	1909	202	11,097	144	1,077	9,876	14,371	16,373	1,454	6,026	9,096	20,512	11,416
	1904	157	10,702	120	872	9,710	.....	13,007	1,037	5,386	7,537	17,662	10,125
	1899	119	8,792	107	735	7,950	.....	8,114	755	3,703	5,897	12,519	7,122
Gas and electric fixtures and lamps and reflectors.	1909	63	2,068	30	436	1,602	1,000	2,706	588	914	2,124	4,683	2,559
	1904	40	1,143	30	183	930	.....	1,422	204	532	1,009	2,485	1,476
	1899	48	704	41	105	598	.....	746	152	306	653	1,630	977
Gloves and mittens, leather.....	1909	25	1,223	29	85	1,109	570	900	130	441	1,308	2,181	873
	1904	21	1,139	27	63	1,049	.....	506	62	390	749	1,511	762
	1899	22	1,058	20	70	1,559	.....	624	75	606	1,085	2,240	1,155
Gold and silver, leaf and foil.....	1909	7	159	6	10	143	13	66	15	61	128	226	98
	1904	5	154	6	8	140	.....	52	9	74	100	223	123
	1899	5	101	5	2	94	.....	41	1	44	101	178	77
Grease and tallow.....	1909	10	773	7	117	640	2,207	2,181	187	452	3,781	4,948	1,167
	1904	13	652	10	82	560	.....	1,130	90	371	1,417	2,303	886
	1899	9	335	9	57	209	.....	606	52	161	1,677	1,922	345

¹Excluding statistics for two establishments, to avoid disclosure of individual operations.²Not reported separately.³Figures can not be shown without disclosing individual operations.⁴Excluding statistics for one establishment, to avoid disclosure of individual operations.

STATISTICS OF MANUFACTURES.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horsepower.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
CHICAGO—Continued.													
Hand stamps and stencils and brands...	1909	27	273	29	72	172	100	\$287	\$57	\$101	\$167	\$467	\$300
	1904	25	293	24	47	222	.....	251	27	134	84	363	279
	1899	24	285	20	37	228	.....	248	30	113	128	452	324
Hats and caps, other than felt, straw, and wool.	1909	38	574	48	63	463	61	280	64	267	479	1,046	567
	1904	35	510	51	23	436	.....	175	17	253	536	1,027	491
	1899	48	521	48	44	429	.....	321	37	214	479	952	473
Hosiery and knit goods.....	1909	29	837	36	58	743	167	908	90	289	783	1,477	684
	1904	30	828	38	21	769	.....	595	22	262	621	1,309	688
	1899	19	615	13	22	530	.....	321	26	148	319	647	328
Ice, manufactured.....	1909	6	229	.....	23	206	3,024	1,136	42	153	126	569	443
	1904	3	188	3	52	133	.....	341	47	78	87	349	262
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ink, printing.....	1909	7	86	3	45	38	185	254	72	26	164	415	251
	1904	6	64	4	27	33	.....	133	37	17	99	257	158
	1899	7	35	7	14	14	.....	100	9	8	59	96	37
Iron and steel, steel works and rolling mills.	1909	6	7,689	.....	706	6,983	79,456	32,577	978	5,603	29,023	45,984	16,961
	1904	5	5,595	.....	508	5,087	.....	16,912	638	3,526	16,711	24,840	8,129
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jewelry.....	1909	55	1,169	55	204	910	294	1,574	194	606	1,218	2,635	1,417
	1904	41	892	49	133	710	.....	825	123	455	798	1,746	948
	1899	31	597	37	76	484	.....	754	82	341	802	1,601	799
Lapidary work.....	1909	3	18	2	2	14	6	34	1	13	53	88	35
	1904	4	28	5	4	19	.....	52	3	18	82	140	58
	1899	4	26	4	2	20	.....	56	2	12	99	149	50
Leather goods.....	1909	99	2,581	96	307	2,178	804	2,877	367	1,174	3,280	5,861	2,581
	1904	82	2,354	74	258	2,022	.....	2,421	299	1,076	2,492	5,023	2,531
	1899	72	.....	196	2,023	.....	.....	1,876	209	885	2,078	3,858	1,780
Leather, tanned, curried, and finished..	1909	24	2,841	23	144	2,674	6,212	14,486	242	1,418	10,788	13,244	2,456
	1904	23	2,577	18	80	2,479	.....	10,749	111	1,188	7,133	9,420	2,287
	1899	22	2,128	20	61	2,047	.....	4,075	130	1,061	5,142	6,979	1,837
Liquors, malt.....	1909	45	3,450	2	581	2,867	15,666	29,385	1,145	2,378	4,850	19,512	14,662
	1904	56	3,314	11	540	2,793	.....	28,353	1,004	2,127	3,529	16,933	13,454
	1899	37	2,670	9	389	2,272	.....	25,525	812	1,508	2,959	14,957	11,998
Lumber and timber products.....	1909	195	11,680	119	1,099	10,462	25,917	17,695	1,448	6,149	20,768	32,709	11,941
	1904	154	8,600	106	700	7,794	.....	11,431	845	4,013	11,763	19,808	8,045
	1899	128	6,153	128	359	5,666	.....	6,249	381	2,669	6,660	11,536	4,976
Marble and stone work.....	1909	107	1,640	108	144	1,388	3,002	2,557	230	1,137	1,714	3,930	2,216
	1904	73	1,537	97	103	1,337	.....	1,872	170	951	1,244	3,356	2,112
	1899	71	.....	106	1,103	.....	.....	1,572	130	708	735	2,061	1,326
Mattresses and spring beds.....	1909	58	835	53	99	683	495	837	135	371	1,349	2,377	1,028
	1904	46	874	45	74	755	.....	802	83	331	1,011	1,753	742
	1899	49	723	56	71	596	.....	528	60	284	705	1,438	783
Models and patterns, not including paper patterns.	1909	56	435	63	50	322	494	362	47	227	161	687	526
	1904	49	351	52	26	273	.....	222	29	197	75	494	419
	1899	49	304	58	8	238	.....	228	7	142	65	342	277
Musical instruments and materials, not specified.	1909	27	418	33	53	332	200	502	57	199	172	614	442
	1904	24	547	22	41	484	.....	628	51	299	206	663	457
	1899	26	471	22	24	425	.....	347	20	214	166	507	341
Musical instruments, pianos and organs and materials.	1909	37	5,792	12	571	5,209	4,677	17,335	812	3,034	4,848	11,487	6,639
	1904	32	5,383	11	486	4,886	.....	10,818	603	2,716	3,416	8,488	5,072
	1899	30	4,415	21	337	4,057	.....	9,740	425	2,034	2,730	6,802	4,072
Paint and varnish.....	1909	61	2,667	27	1,034	1,606	5,837	13,830	1,587	996	11,845	18,942	7,097
	1904	52	1,842	13	634	1,195	.....	9,798	940	725	8,202	12,665	4,463
	1899	46	1,385	16	503	866	.....	5,421	690	462	5,607	8,066	2,489
Paper goods, not elsewhere specified....	1909	41	1,255	27	271	957	607	1,367	290	410	1,393	2,831	1,438
	1904	29	508	19	66	423	.....	435	69	154	325	781	456
	1899	17	401	16	40	345	.....	185	41	104	211	455	244
Patent medicines and compounds and druggists' preparations.	1909	273	3,011	160	1,490	1,361	2,030	5,377	1,512	632	3,216	10,360	7,144
	1904	243	2,949	173	1,212	1,564	.....	5,820	1,119	675	2,833	11,942	9,109
	1899	204	2,031	168	734	1,129	.....	2,821	640	448	1,745	5,921	4,176
Photographic apparatus and materials..	1909	13	356	8	64	284	430	708	81	157	318	740	422
	1904	19	473	13	200	260	.....	468	156	124	282	802	520
	1899	18	215	21	41	153	.....	169	25	70	156	494	338
Photo-engraving.....	1909	21	1,186	4	304	878	405	902	341	848	422	2,156	1,734
	1904	18	800	5	224	571	.....	563	236	507	254	1,324	1,070
	1899	20	834	8	165	661	.....	359	171	449	155	1,061	906
Printing and publishing.....	1909	1,395	33,439	1,065	10,048	22,326	20,162	47,982	10,725	15,077	21,256	74,211	52,955
	1904	1,262	25,147	983	6,700	17,464	.....	33,088	6,836	11,279	14,872	53,633	38,161
	1899	1,093	20,845	946	4,482	15,417	.....	22,336	4,033	7,962	9,357	36,238	26,881

¹ Figures can not be shown without disclosing individual operations.

² Not reported separately.

³ Excluding statistics for one establishment, to avoid disclosure of individual operations.

⁴ Excluding statistics for two establishments, to avoid disclosure of individual operations.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employ-ees.	Wage earners (average number).							
Expressed in thousands.													
CHICAGO—Continued.													
Pumps, not including steam pumps....	1909	6	74	1	21	52	43	\$94	\$29	\$38	\$72	\$179	\$107
	1904	8	74	3	13	58	.....	103	13	46	82	199	117
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rubber goods, not elsewhere specified..	1909	13	145	8	33	104	293	252	28	53	200	381	181
	1904	10	1,815	5	156	1,154	.....	1,550	167	453	1,645	2,808	1,183
	1899	15	1,111	17	204	830	.....	1,127	201	390	1,915	3,586	1,671
Shipbuilding, including boat building..	1909	8	300	7	17	282	902	1,858	18	174	108	359	251
	1904	7	205	7	8	190	.....	1,000	12	113	58	244	188
	1899	7	178	9	9	160	.....	284	13	86	55	187	132
Slaughtering and meat packing.....	1909	67	27,147	66	5,017	22,004	45,629	115,312	5,535	11,085	285,250	325,062	39,812
	1904	56	27,803	63	4,973	22,767	.....	70,517	5,951	12,483	237,754	270,549	32,795
	1899	51	.....	.....	4,020	25,474	.....	67,301	4,241	12,046	218,737	257,270	38,533
Smelting and refining, not from the ore.	1909	7	127	4	32	91	168	816	71	63	2,237	2,574	337
	1904	6	38	3	10	25	.....	184	17	20	1,002	1,140	138
	1899	5	37	5	4	28	.....	40	5	21	202	278	76
Soap.....	1909	27	3,320	17	1,173	2,139	4,907	11,474	1,333	1,035	13,787	19,939	6,152
	1904	23	2,387	15	537	1,835	.....	7,232	617	857	9,125	13,770	4,545
	1899	27	1,872	24	364	1,484	.....	6,307	426	532	5,793	9,065	3,272
Steam packing.....	1909	15	160	8	44	108	146	157	42	62	194	408	214
	1904	11	178	6	42	130	.....	161	40	66	222	468	246
	1899	7	113	4	26	83	.....	65	21	40	78	231	153
Stereotyping and electrotyping.....	1909	21	747	13	142	562	725	777	187	472	316	1,282	966
	1904	18	773	8	114	651	.....	641	135	524	224	1,165	941
	1899	15	515	9	51	455	.....	344	68	200	94	673	579
Stoves and furnaces, including gas and oil stoves.	1909	28	1,263	14	201	1,048	937	2,546	272	726	1,157	3,183	2,026
	1904	20	848	11	85	752	.....	1,669	126	463	878	2,138	1,260
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Surgical appliances and artificial limbs..	1909	24	807	13	265	529	592	1,658	372	279	917	2,075	1,158
	1904	27	555	17	107	431	.....	614	140	177	410	1,004	594
	1899	24	275	17	75	183	.....	230	104	84	168	513	345
Tobacco manufactures.....	1909	1,050	6,758	1,111	427	5,220	783	10,331	717	2,785	6,722	16,638	9,911
	1904	900	5,589	1,030	212	4,347	.....	6,794	209	2,283	4,199	11,017	6,818
	1899	822	4,569	877	200	3,492	.....	2,239	242	1,037	2,880	8,174	5,294
Type founding and printing materials..	1909	19	588	9	141	438	391	1,852	201	303	375	1,248	873
	1904	17	574	15	127	432	.....	2,111	139	293	321	1,168	847
	1899	10	533	4	86	443	.....	505	91	240	360	1,257	897
All other industries.....	1909	1,395	60,504	929	9,098	50,477	159,447	326,874	11,140	28,397	142,590	234,104	91,514
	1904	1,086	40,730	870	6,497	30,369	.....	168,873	7,387	21,506	101,888	164,900	63,012
	1899	1,022	.....	.....	8,248	44,875	.....	208,645	7,478	22,776	104,309	170,032	65,723
EAST ST. LOUIS—All industries.													
	1909	139	6,005	92	661	5,252	23,273	\$31,398	\$691	\$3,250	\$11,440	\$18,228	\$6,788
	1904	91	4,951	52	394	4,505	.....	12,854	473	2,494	5,698	10,598	4,899
	1899	58	.....	.....	112	3,106	.....	5,448	147	1,426	3,678	6,241	2,563
Bread and other bakery products.....	1909	20	121	21	20	71	40	128	25	53	177	336	159
	1904	11	76	9	9	58	.....	87	6	41	124	221	97
	1899	9	37	8	.....	20	.....	27	.....	10	53	95	42
Carriages and wagons and materials.....	1909	5	35	4	3	28	10	55	2	15	24	56	32
	1904	3	31	4	3	24	.....	25	2	15	20	48	28
	1899	3	17	4	.....	13	.....	17	.....	9	4	19	15
Copper, tin, and sheet-iron products....	1909	14	92	17	2	73	.....	53	1	66	82	183	101
	1904	4	33	1	3	29	.....	37	3	21	16	51	35
	1899	5	.....	.....	.....	13	.....	8	.....	9	31	62	31
Foundry and machine-shop products...	1909	11	925	3	65	857	1,251	2,031	108	513	1,053	1,872	819
	1904	5	811	.....	50	761	.....	1,314	78	456	709	1,417	708
	1899	3	800	.....	23	867	.....	901	37	433	662	1,268	666
Lumber and timber products.....	1909	7	147	9	36	102	685	405	19	62	211	328	117
	1904	7	115	2	23	90	.....	244	17	77	98	236	138
	1899	3	46	5	1	40	.....	20	1	23	66	111	45
Printing and publishing.....	1909	8	77	5	22	50	51	148	17	38	27	105	78
	1904	9	75	14	11	50	.....	52	11	28	19	83	64
	1899	5	49	4	4	41	.....	45	4	17	12	56	44
Tobacco manufactures.....	1909	12	23	12	.....	11	.....	10	.....	9	12	40	28
	1904	9	29	9	.....	20	.....	22	.....	11	11	39	28
	1899	4	15	6	.....	0	.....	4	.....	4	7	18	11
All other industries.....	1909	62	4,585	21	504	4,000	21,221	28,459	510	2,494	9,854	15,308	5,454
	1904	43	3,781	13	295	3,473	.....	11,073	350	1,845	4,699	8,491	3,752
	1899	20	.....	.....	84	2,094	.....	4,417	105	915	2,843	4,612	1,769

¹ Figures can not be shown without disclosing individual operations.

² Excluding statistics for one establishment, to avoid disclosure of individual operations.

³ Not reported separately.

⁴ Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

⁵ Excluding statistics for two establishments, to avoid disclosure of individual operations.

STATISTICS OF MANUFACTURES.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 50,000 INHABITANTS OR MORE—ALL INDUSTRIES COMBINED AND SELECTED INDUSTRIES—Continued.

INDUSTRY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
PEORIA—All industries.....	1909	283	7,323	242	1,100	5,981	16,266	\$24,945	\$1,331	\$3,552	\$17,773	\$63,061	\$45,288
	1904	263	6,797	227	736	5,834	20,513	20,513	815	3,209	15,835	60,420	44,586
	1899	291	6,886	227	686	5,996	26,638	26,638	709	2,872	12,985	44,569	31,584
Bread and other bakery products.....	1909	39	274	39	41	194	172	289	22	104	482	764	282
	1904	40	237	41	24	172	436	436	20	81	430	660	230
	1899	42	290	42	37	211	301	301	13	76	325	562	237
Carriages and wagons and materials....	1909	8	78	9	6	63	62	106	4	41	69	141	72
	1904	26	125	6	5	114	199	199	6	57	128	211	83
	1899	18	125	6	8	127	154	154	7	57	141	243	102
Cooperage and wooden goods, not elsewhere specified.	1909	5	543	2	27	514	910	935	50	172	840	1,153	313
	1904	4	466	2	17	447	636	636	38	176	984	1,268	304
	1899	4	773	1	22	750	872	872	34	356	776	1,325	549
Copper, tin, and sheet-iron products....	1909	9	283	12	32	239	196	415	33	130	453	684	231
	1904	10	215	7	27	181	210	210	26	90	211	395	184
	1899	8	215	7	17	133	184	184	14	59	143	301	158
Flour-mill and gristmill products.....	1909	4	54	6	14	34	326	199	9	22	640	759	119
	1904	3	47	5	10	32	282	282	10	19	487	594	107
	1899	3	47	5	8	28	176	176	7	15	384	481	97
Foundry and machine-shop products....	1909	20	488	10	58	420	986	915	75	315	515	1,082	567
	1904	19	463	16	49	398	804	804	48	221	298	786	488
	1899	25	463	16	80	440	729	729	65	214	610	1,130	520
Leather goods.....	1909	4	55	7	11	37	10	30	6	24	21	72	51
	1904	3	59	4	8	47	140	140	9	30	68	151	83
	1899	6	59	4	8	63	112	112	5	29	93	169	76
Liquors, distilled.....	1909	4	652	70	582	3,367	5,959	5,959	149	380	7,478	44,570	37,092
	1904	6	597	36	561	561	4,515	4,515	72	323	4,944	42,171	37,227
	1899	11	246	33	213	213	2,467	2,467	53	124	2,554	26,792	24,238
Liquors, malt.....	1909	3	228	31	197	990	2,211	2,211	81	143	199	1,101	902
	1904	3	132	22	110	22	1,196	1,196	34	79	184	888	704
	1899	3	115	26	89	89	848	848	35	47	112	531	419
Lumber and timber products.....	1909	6	190	7	17	166	458	366	20	120	184	398	214
	1904	5	169	5	9	155	242	242	9	95	177	325	148
	1899	3	69	2	8	59	118	118	7	32	88	158	70
Models and patterns, not including paper patterns.	1909	4	16	5	11	24	15	15	1	7	2	21	19
	1904	3	12	2	1	9	11	11	1	7	1	15	14
	1899	4	12	2	1	9	11	11	1	7	1	15	14
Printing and publishing.....	1909	32	513	25	163	325	410	606	167	209	221	881	660
	1904	26	390	29	81	280	432	432	78	165	166	608	442
	1899	29	375	30	86	259	392	392	64	137	159	543	384
Tobacco manufactures.....	1909	36	369	41	20	308	273	273	15	204	240	647	407
	1904	43	338	45	17	276	233	233	12	155	162	479	317
	1899	32	279	35	4	240	150	150	3	133	117	357	240
All other industries.....	1909	109	3,580	79	610	2,891	8,355	12,626	700	1,679	6,429	10,788	4,359
	1904	92	3,547	65	430	3,052	11,177	11,177	452	1,711	7,595	11,849	4,254
	1899	117	3,547	65	351	3,384	20,135	20,135	402	1,593	7,483	11,977	4,494
SPRINGFIELD—All industries.....	1909	171	4,355	174	529	3,652	6,368	\$7,174	\$466	\$2,096	\$4,204	\$8,497	\$4,293
	1904	122	3,546	118	357	3,071	5,264	5,264	383	1,639	2,490	5,797	3,307
	1899	108	3,546	118	174	2,199	3,459	3,459	164	1,037	1,412	3,467	2,055
Bread and other bakery products.....	1909	16	88	22	11	55	79	24	7	43	182	310	128
	1904	10	57	11	46	26	82	82	34	132	204	204	72
	1899	12	39	13	26	26	33	33	14	53	92	92	39
Carriages and wagons and materials....	1909	7	70	10	6	54	80	100	4	35	41	98	57
	1904	4	26	5	21	21	59	59	10	10	12	28	16
	1899	5	39	9	30	30	50	50	13	14	14	38	24
Copper, tin, and sheet-iron products....	1909	10	77	11	6	60	32	79	5	39	90	178	88
	1904	6	51	7	2	42	70	70	2	29	47	95	48
	1899	5	51	7	2	24	29	29	2	12	20	43	23
Foundry and machine-shop products....	1909	10	270	14	35	221	794	647	28	135	255	482	227
	1904	4	286	6	39	241	397	397	32	127	153	427	274
	1899	6	194	7	9	178	246	246	6	93	107	267	160
Lumber and timber products.....	1909	7	176	10	19	147	312	220	14	89	110	242	132
	1904	4	153	3	3	147	174	174	2	108	131	280	149
	1899	4	99	4	4	80	139	139	3	56	112	201	89
Marble and stone work.....	1909	5	36	4	6	25	70	96	10	20	52	119	67
	1904	3	39	2	3	34	52	52	3	20	41	84	43
	1899	3	29	2	1	25	42	42	1	16	40	79	39
Printing and publishing.....	1909	27	549	20	208	321	257	584	133	203	163	739	576
	1904	16	447	8	85	354	411	411	66	181	93	470	377
	1899	13	296	11	44	241	233	233	34	115	70	310	240
Tobacco manufactures.....	1909	30	157	31	4	122	54	54	4	61	73	206	133
	1904	32	166	38	2	126	68	68	1	61	64	195	131
	1899	20	110	21	3	86	40	40	2	34	43	124	81
All other industries.....	1909	59	2,932	52	234	2,646	4,744	5,270	261	1,471	3,238	6,123	2,885
	1904	43	2,321	38	223	2,069	3,951	3,951	277	1,069	1,817	4,014	2,197
	1899	38	2,321	38	111	1,498	2,647	2,647	116	684	953	2,313	1,360

1 Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.
 2 Excluding statistics for one establishment, to avoid disclosure of individual operations.
 3 Excluding statistics for two establishments, to avoid disclosure of individual operations.
 4 Figures can not be shown without disclosing individual operations.

TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

CITY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employes.	Wage earners (average number).							
Expressed in thousands.													
Alton.....	1909	69	2,720	45	255	2,420	5,453	\$5,585	\$200	\$1,528	\$7,262	\$10,096	\$2,834
	1904	62	3,346	37	240	3,069	.....	4,002	220	1,728	5,423	8,697	3,274
	1899	59	.....	.....	123	.....	.....	2,773	112	1,037	2,472	4,250	1,778
Aurora.....	1909	165	5,884	165	624	5,095	7,900	11,427	722	2,036	5,580	10,954	5,374
	1904	103	4,517	91	348	4,078	.....	6,800	387	2,068	3,538	7,329	3,791
	1899	97	.....	.....	280	3,049	.....	4,666	275	1,615	2,592	5,638	3,046
Belleville.....	1909	119	2,248	107	209	1,872	4,541	5,541	296	1,062	2,324	4,015	2,291
	1904	96	2,005	75	165	1,765	.....	3,084	171	1,011	1,787	4,357	2,570
	1899	89	.....	.....	118	1,335	.....	2,314	108	620	935	2,873	1,938
Bloomington.....	1909	107	2,495	99	310	2,077	2,877	4,702	325	1,186	2,527	4,808	2,341
	1904	81	2,679	78	326	2,275	.....	3,347	268	1,228	3,492	5,777	2,285
	1899	68	.....	.....	166	1,671	.....	2,135	127	797	1,595	3,012	1,417
Cairo.....	1909	50	1,444	51	156	1,237	4,764	4,854	178	628	2,957	4,440	1,483
	1904	57	1,640	64	150	1,435	.....	3,086	153	653	2,838	4,351	1,543
	1899	53	.....	.....	105	1,501	.....	1,936	92	548	1,900	3,117	1,217
Canton.....	1909	33	1,421	39	120	1,202	3,710	8,180	120	602	1,188	2,942	1,759
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Champaign.....	1909	42	381	44	64	273	470	895	52	174	419	846	427
	1904	36	360	40	31	289	.....	580	28	169	158	486	328
	1899	33	.....	.....	26	245	.....	379	23	118	182	354	222
Chicago Heights.....	1909	79	4,444	60	431	3,053	10,176	10,421	606	2,471	5,011	10,839	5,228
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Closro.....	1909	7	735	2	75	658	1,580	2,496	97	406	733	1,461	728
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Danville.....	1909	76	2,044	76	224	1,744	3,258	2,656	286	1,077	1,430	3,351	1,921
	1904	70	2,109	77	148	1,884	.....	2,102	129	977	1,665	3,304	1,639
	1899	72	.....	.....	47	957	.....	1,418	47	458	1,047	1,914	867
Decatur.....	1909	157	3,447	148	600	2,699	6,447	6,579	609	1,420	5,918	9,768	3,860
	1904	116	2,841	91	410	2,340	.....	4,874	873	1,125	5,593	8,667	3,074
	1899	108	.....	.....	217	1,920	.....	3,296	201	830	3,359	5,134	1,775
Elgin.....	1909	115	6,583	100	389	6,094	6,059	16,070	491	3,379	4,538	11,120	6,582
	1904	76	5,253	72	296	4,885	.....	10,980	427	2,713	4,000	9,349	5,299
	1899	80	.....	.....	152	4,379	.....	8,383	189	2,074	2,614	6,398	3,772
Evanston.....	1909	60	1,040	63	140	837	1,050	4,241	178	590	2,350	3,778	1,428
	1904	33	870	36	102	738	.....	1,723	76	384	1,583	2,551	968
	1899	27	.....	.....	29	400	.....	1,200	24	192	362	880	468
Freeport.....	1909	69	3,225	56	316	2,853	4,412	6,403	307	1,570	4,417	7,811	3,394
	1904	61	1,754	70	168	1,516	.....	3,400	145	827	1,423	3,109	1,686
	1899	51	.....	.....	127	1,333	.....	2,010	118	695	1,314	2,708	1,394
Galesburg.....	1909	62	1,738	58	215	1,465	1,968	2,454	201	887	1,416	2,919	1,533
	1904	58	1,665	46	172	1,447	.....	1,566	165	756	936	2,218	1,232
	1899	39	.....	.....	99	1,070	.....	1,285	89	521	620	1,450	830
Jacksonville.....	1909	57	1,060	58	91	947	1,180	1,503	84	487	1,307	2,299	992
	1904	55	1,077	70	108	899	.....	1,817	115	458	1,102	1,982	880
	1899	55	.....	.....	113	1,066	.....	1,296	103	433	850	1,684	834
Joliet.....	1909	137	7,266	128	755	6,333	37,744	25,586	930	4,485	27,768	38,817	11,059
	1904	104	6,627	86	749	5,792	.....	14,136	853	3,099	21,259	32,897	11,638
	1899	135	.....	.....	406	5,792	.....	15,040	345	3,548	17,193	26,132	8,939
Kankakee.....	1909	55	1,552	60	143	1,349	3,988	2,590	105	622	1,493	2,723	1,230
	1904	49	1,205	47	120	1,038	.....	1,746	120	512	1,026	2,089	1,003
	1899	36	.....	.....	19	377	.....	604	19	162	289	649	350
La Salle.....	1909	29	1,439	24	122	1,293	8,795	4,398	324	856	2,928	5,308	2,380
	1904	24	1,298	22	79	1,197	.....	2,063	139	685	1,878	3,158	1,280
	1899	26	.....	.....	67	917	.....	2,020	177	447	2,397	3,309	912
Lincoln.....	1909	40	308	49	39	220	385	611	32	115	290	570	280
	1904	39	331	53	42	230	.....	551	26	125	375	784	409
	1899	36	.....	.....	31	188	.....	398	17	82	156	375	219
Mattoon.....	1909	35	1,102	39	115	948	1,019	832	94	561	668	1,434	766
	1904	34	1,112	32	58	1,022	.....	683	60	599	522	1,309	787
	1899	30	.....	.....	38	632	.....	449	22	297	346	764	418
Moline.....	1909	66	6,106	44	613	5,449	10,230	26,334	888	3,523	11,189	20,892	9,703
	1904	62	4,474	45	442	3,987	.....	24,405	630	2,363	6,895	13,158	6,283
	1899	55	.....	.....	332	4,138	.....	10,694	372	2,116	4,598	9,302	4,704
Oak Park.....	1909	23	362	21	59	282	758	6,061	57	197	391	1,118	727
	1904	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1899	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Figures not available.

² Not incorporated in 1900.

³ Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

STATISTICS OF MANUFACTURES.

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TABLE I.—COMPARATIVE SUMMARY FOR 1909, 1904, AND 1899—Continued.

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED—Continued.

CITY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
			Total.	Proprietors and firm members.	Salaried employ-ees.	Wage earners (average number).							
Quincy.....	1909	235	5,056	201	823	4,032	7,557	\$11,906	\$680	\$2,083	\$5,792	\$11,436	\$5,644
	1904	234	5,509	207	700	4,602		9,470	643	2,206	5,188	10,748	5,560
	1899	108	408	3,815		6,443	364	1,602	4,351	7,919	3,568
Rock Island.....	1909	74	2,173	51	374	1,754	3,173	9,287	366	1,026	2,818	5,387	2,569
	1904	72	2,027	58	266	1,703		7,203	292	895	2,580	5,333	2,753
	1899	66	184	1,885		4,762	190	952	2,683	4,622	1,939
Rockford.....	1909	205	10,523	208	1,006	9,309	16,217	22,412	1,131	5,213	10,582	22,266	11,684
	1904	180	7,969	112	618	7,239		14,159	669	3,608	8,066	15,276	7,210
	1899	159	430	5,851		13,613	405	2,397	6,202	11,022	4,520
Streator.....	1909	45	1,409	44	90	1,275	3,140	4,588	103	644	817	2,137	1,320
	1904	34	1,629	35	50	1,544		1,379	68	1,035	584	1,839	1,305
	1899	42	41	1,283		937	44	602	362	1,245	883
Waukegan.....	1909	59	3,773	146	537	3,090	23,144	17,092	586	2,103	14,164	19,984	5,820
	1904	42	2,614	34	315	2,265		8,608	363	1,436	7,721	10,994	3,273
	1899	32	41	495		771	40	151	338	733	396

† Figures do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city.

TABLE II.—DETAIL STATEMENT FOR

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, supts. and managers.	Clerks.		Average number.	Wage earners.		Total.	10 and over.		Under 16.				
					Male.	Female.		Maximum month.	Minimum month.		Male.	Female.	Male.	Female.			
															Number.		
1 All industries	18,020	561,044	17,357	16,254	46,390	15,270	405,764	De 498,640	Ja 438,594	(1)	(1)	(1)	(1)	(1)	1,013,071		
2 Agricultural implements	79	21,511	48	604	1,342	277	19,240	De 21,855	Jy 16,301	21,528	21,244	204	20	(1)	38,040		
3 Artificial flowers and leathers and plumes	25	338	20	3	10	7	284	Mh 330	Jy 241	311	40	258	13		12		
4 Artificial stone	306	1,312	473	32	11	11	785	Jo 1,040	Ja 360	1,117	1,117				1,111		
5 Automobiles, including bodies and parts	65	2,804	41	122	195	64	2,382	My 2,524	No 2,107	2,598	2,502	80			1,788		
6 Babbitt metal and solder	19	291	6	34	40	19	183	De 243	Mh 137	245	242	2	1		988		
7 Bags, other than paper	6	213	4	6	8	6	189	Oo 199	Ap 173	108	88	110			157		
8 Bags, paper	4	231	1	8	26	2	194	So 216	My 182	200	136	64			455		
9 Baking powders and yeast	24	1,139	11	48	316	101	657	De 680	Jy 624	680	311	372			1,199		
10 Baskets, and rattan and willow ware	15	78	16	10			62	Jy 83	Ja 44	64	46	18	6		16		
11 Belting and hose, leather	11	403	9	25	116	20	233	So 251	Fe 210	247	241	6			430		
12 Bicycles, motorcycles, and parts	14	1,005	8	12	66	9	910	Je 1,047	Ja 720	933	929				775		
13 Billiard tables and materials	8	204	6	9	17	5	167	My 211	De 133	133	125		4		213		
14 Blacking and cleansing and polishing preparations	58	407	50	20	65	30	236	Oc 251	Ja 218	240	150	84	15		336		
15 Bluing	10	28	8	1		1	18	De 21	Ja 16	21	11	8	2		23		
16 Boots and shoes, including cut stock and findings	53	6,302	38	113	311	138	5,702	Fe 5,981	Jo 5,572	5,917	3,023	1,963	177	164	2,770		
17 Boxes, cigar	18	463	17	11	24	7	404	Se 421	Mh 392	410	148	220	14	28	296		
18 Boxes, fancy and paper	61	4,509	31	150	139	104	4,085	De 4,448	Do 3,925	4,448	1,523	2,478	44	403	4,143		
19 Brass and bronze products	79	2,052	56	110	138	60	1,688	Da 1,861	Mh 1,574	1,865	1,817	41	7		1,859		
20 Bread and other bakery products	2,009	12,566	2,409	161	801	584	8,611	Au 8,795	Ja 8,319	8,871	7,047	1,711	56	57	5,618		
21 Brick and tile	340	7,347	384	242	117	30	6,574	Jo 8,302	Ja 3,705	7,840	7,796		53		36,013		
22 Brooms	87	682	98	23	56	11	404	De 550	Jo 452	641	537	92	6	6	365		
23 Brushes	32	392	26	15	16	9	326	My 358	Jy 308	321	212	103	2	4	138		
24 Butter, cheese, and condensed milk	295	3,000	396	133	187	62	1,732	Jo 1,867	De 1,627	1,880	1,340	335	6	8	6,753		
25 Buttons	28	623	39	18	6	17	548	De 685	Jy 434	680	588	92	5	1	276		
26 Calum lights	3	12	1	2		2	7	De 7	Jo 6	7	7				10		
27 Canning and preserving	118	2,800	113	114	140	50	2,383	Se 6,539	Ja 1,013	4,066	2,428	2,390	82	87	4,305		
28 Carpets, rag	67	306	69	10	18	3	266	My 302	Fe 218	293	230	88	5		220		
29 Carriages and wagons and materials	325	6,746	349	188	260	97	5,852	My 6,099	Ja 5,345	6,094	5,075	106	13		9,684		
30 Cars and general shop construction and repairs by steam-railroad companies	73	24,406		304	835	46	23,131	De 25,501	My 21,310	25,501	25,441	56	4		20,790		
31 Cars and general shop construction and repairs by street-railroad companies	30	2,364		73	49	2	2,240	No 2,427	Jy 2,101	2,573	2,500	4			2,225		
32 Cars, steam-railroad, not including operations of railroad companies	28	11,782	2	200	589	40	10,945	De 14,553	Au 8,070	13,746	13,005	51			18,651		
33 Cement	6	1,530	28	95	18	1	1,305	Jo 1,491	Fe 1,254	1,468	1,460	2			15,270		
34 Chemicals	19	972	2	37	69	28	830	No 903	Fe 600	976	904	12			5,907		
35 Clocks and watches, including cases and materials	19	5,883	9	37	125	47	5,665	No 5,931	Ap 5,493	5,881	3,232	2,014	23	12	2,578		
36 Cloth, sponging and refinishing	6	106	4	4	3	4	91	De 94	Au 87	94	93				36		
37 Clothing, men's, including shirts	716	41,122	861	400	2,544	1,105	36,152	So 37,746	Ja 33,275	38,403	18,081	10,363	206	793	3,729		
38 Clothing, women's	221	7,270	267	143	483	235	6,151	Oo 6,805	Ja 5,578	6,524	2,031	4,397	9	87	804		
39 Coffee and spice, roasting and grinding	35	1,792	23	71	596	84	1,618	No 1,070	Au 975	1,043	583	429	18	13	2,709		
40 Coffins, burial cases, and undertakers' goods	21	924	10	41	130	11	732	Mh 774	So 705	717	508	182	7	20	1,071		
41 Confectionery	140	4,622	112	112	392	207	3,799	Oo 4,617	Ja 3,299	4,403	1,546	2,645	25	277	3,417		
42 Cooperage and wooden goods, not elsewhere specified	80	2,617	56	95	50	28	2,388	No 2,085	Jo 2,241	2,572	2,550	2	14		5,247		
43 Copper, tin, and sheet-iron products	483	8,897	508	270	425	215	7,473	De 7,923	Ja 6,551	8,020	6,837	1,045	85	53	5,510		
44 Cordage and twine and jute and linen goods	7	1,884	40	28	8	1	1,799	De 2,147	Au 1,610	2,102	950	1,142	14	50	6,459		
45 Cork, cutting	4	112	1	4	4	1	102	Mh 113	Jy 98	99	65	84			64		
46 Corsets	16	1,063	6	30	59	66	1,592	Fe 1,574	Jo 1,400	1,470	104	1,248	25	102	541		
47 Cotton goods, including cotton small wares	5	1,397		33	26	19	1,319	De 1,454	Ja 1,212	1,454	445	911	43	55	2,020		
48 Cutlery and tools, not elsewhere specified	80	1,061	63	72	81	52	1,303	De 1,517	Ja 1,322	1,547	1,402	117	22	6	2,385		
49 Dairyman's, poultrymen's, and apiculturists' supplies	29	427	30	21	21	32	323	Ap 455	Se 234	343	310	20	4		664		
50 Dentists' materials	10	85	5	9	8	15	48	Ja 52	Jy 44	52	42	8	2		36		
51 Electrical machinery, apparatus, and supplies	143	11,854	55	367	1,202	529	9,641	No 11,278	Ja 8,112	11,382	8,566	2,703	44	9	11,636		
52 Electroplating	43	457	49	18	7	8	375	No 397	Au 352	399	373	11	12	3	708		
53 Emery and other abrasive wheels	4	67	3	9	10	4	41	De 43	Fe 39	43	40	3			42		
54 Enameling and japanning	5	35	4	2			20	Oo 36	Ja 22	34	31		3		15		
55 Explosives	8	327		15	15	7	200	De 326	Ap 251	326	325				1,623		
56 Fan articles, not elsewhere specified	44	613	32	43	53	41	444	Oo 556	Ap 334	521	290	215	8	8	230		
57 Files	4	85	5	2	1	1	76	Fe 70	Au 74	78	78				522		
58 Fire extinguishers, chemical	5	54	2	5	16	3	28	Au 33	De 21	32	29	3			11		
59 Fireworks	6	114	1	8	4	3	98	Ap 126	Jy 64	95	49	46			48		
60 Flags, banners, regalia, society badges, and emblems	24	376	18	12	33	20	293	Jo 345	De 267	267	64	181	5	7	57		
61 Flour-mill and gristmill products	461	3,634	544	253	285	88	2,464	Au 2,557	Jo 2,272	2,627	2,608	17	2		38,473		
62 Foundry and machine-shop products	1,178	61,303	700	2,317	4,893	1,157	52,266	De 59,229	Ja 47,907	59,221	57,542	1,450	211	18	92,531		
63 Fur goods	63	473	63	21	57	13	310	No 434	Mh 237	394	215	175	1	3	59		
64 Furnishing goods, men's	61	3,116	60	59	215	94	2,688	No 3,018	Ja 2,355	2,878	358	2,423	0	33	796		
65 Furniture and refrigerators	267	15,240	300	497	701	257	13,575	Oo 14,451	Ja 12,139	14,125	13,613	323	185	4	20,575		
66 Gas and electric fixtures and lamps and reflectors	78	2,019	41	125	238	125	2,000	No 2,334	Je 1,940	2,335	1,826	458			1,888		
67 Gas, illuminating and heating	78	8,020	2	209	1,315	133	6,301	Je 7,135	Fe 5,018	5,785	5,785				18,585		

1 No figures given for reason explained in the Introduction.

STATISTICS OF MANUFACTURES.

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THE STATE, BY INDUSTRIES: 1909.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$1,548,170,701	\$1,733,327,352	\$38,128,166	\$53,320,948	\$273,319,005	\$48,194,400	\$1,112,732,280	\$11,153,257	\$57,023,503	\$13,625,794	\$125,829,989	\$1,919,276,594	\$758,349,904
2 110,605,187	44,148,098	1,226,127	1,406,696	11,718,384	797,922	24,026,185	8,315	358,174	15,631	4,590,664	57,268,325	32,444,218
3 174,548	332,502	6,970	13,882	85,975	2,000	146,931	17,982	560	520	57,682	257,099	257,099
4 1,236,408	1,123,179	31,639	7,643	439,214	10,548	566,363	11,137	4,358	1,311	50,966	1,488,299	911,288
5 4,083,973	6,774,357	267,622	158,547	1,663,186	61,312	3,917,807	96,973	12,110	70,947	535,853	7,153,818	3,174,699
6 1,409,709	3,817,757	89,838	71,447	108,517	22,617	3,351,255	4,616	8,459		161,008	4,145,789	771,917
7 575,574	895,618	14,500	9,660	175,042	4,060	680,973	4,442	1,453		5,488	965,442	280,409
8 1,690,925	1,028,829	22,492	22,980	98,899	9,804	757,091	756	3,377		103,430	1,123,610	356,715
9 6,115,498	6,017,782	167,123	342,250	346,259	33,293	3,227,629	29,357	20,138		1,851,787	7,632,063	4,871,195
10 40,675	80,046			30,296	413	44,115	3,020	336		1,866	101,472	58,944
11 1,279,470	2,081,612	64,586	118,499	164,636	16,532	1,308,036	30,755	2,935		285,733	2,187,656	802,967
12 1,276,356	1,755,516	25,322	53,072	600,233	19,099	954,033	9,271	3,088	1,060	90,318	1,777,464	804,332
13 381,023	359,957	15,490	26,500	67,690	5,313	153,922	2,220	1,378		66,944	403,163	243,428
14 516,686	997,542	53,909	98,883	122,922	7,385	562,016	17,249	2,270	30	132,878	1,229,961	680,580
15 15,277	52,649	1,800	578	7,862	247	31,816	3,912	58		6,376	66,949	34,886
16 7,599,620	15,485,947	298,955	400,916	3,142,912	106,865	10,761,977	81,340	23,920	4,170	664,892	16,754,704	5,885,862
17 358,050	581,630	20,880	30,357	158,099	8,672	308,414	19,153	1,395	1,000	33,660	664,460	347,353
18 3,813,498	5,650,611	246,707	107,198	1,501,273	64,293	2,947,314	123,416	19,599	25,000	625,961	6,349,621	2,358,074
19 4,055,823	6,180,929	250,033	170,238	1,136,179	95,743	4,051,802	61,443	11,746	2,640	395,105	6,841,735	2,694,160
20 24,224,216	30,899,184	364,029	981,980	5,494,507	672,880	20,933,089	628,589	103,443	1,084	1,717,887	26,117,988	14,512,067
21 18,495,247	8,285,010	347,268	118,882	4,886,001	1,805,102	686,256	13,897	79,548	33,989	815,572	9,765,051	7,273,693
22 722,783	1,248,515	27,590	64,942	235,069	5,758	829,038	9,236	2,691	8,685	65,406	1,464,896	630,160
23 497,181	874,123	25,346	18,780	180,370	4,316	549,830	10,748	1,686		83,067	964,550	410,704
24 7,819,996	16,485,553	175,463	222,812	942,206	259,396	14,007,625	20,150	34,186	225	823,590	17,798,278	3,531,357
25 202,004	587,542	16,231	14,656	246,892	7,187	229,350	8,328	514	10,015	24,369	675,981	439,444
26 29,205	32,385	2,800	1,240	5,292	256	13,130	1,740	60		1,867	26,729	7,243
27 5,629,637	6,704,951	121,632	165,382	903,632	73,393	4,739,303	65,786	26,637	10,383	518,983	7,619,586	2,806,890
28 173,701	249,365	20,454	9,089	115,229	8,943	56,143	12,813	884	700	340,799	340,799	275,713
29 17,858,786	14,810,098	343,145	300,393	3,688,016	182,268	9,297,067	105,562	85,148	4,865	903,634	16,831,263	7,351,948
30 18,722,338	32,236,134	558,697	741,060	15,287,571	943,716	14,289,060		95,395	27	325,608	32,229,243	16,996,467
31 3,885,611	3,439,334	80,476	42,391	1,895,029	44,064	1,763,238	1,250	24,905	554	87,427	3,450,643	1,643,341
32 37,934,778	25,685,563	506,912	494,720	7,823,919	463,240	14,872,742	92,441	133,282	277,851	1,020,456	27,001,092	11,665,110
33 6,686,567	3,197,433	83,855	181,686	854,797	709,369	909,440	15,820	14,826		427,940	4,087,507	2,468,698
34 4,639,170	3,927,458	88,886	92,443	531,915	205,714	2,690,086	6,607	8,839	4,160	299,408	4,658,274	1,760,474
35 12,411,573	5,819,648	143,516	162,117	3,217,149	45,745	1,642,706	6,098	70,233	148	531,936	7,045,275	5,356,824
36 30,806	93,072	6,820	5,688	51,824	672		13,300	201		14,567	119,299	118,624
37 38,762,929	80,393,885	1,314,612	3,179,394	16,690,002	280,747	44,947,533	896,744	77,358	5,259,046	7,858,449	89,472,755	44,244,475
38 5,587,194	14,992,614	334,753	651,855	3,151,998	54,109	9,159,417	282,251	15,434	502,014	840,783	16,635,236	7,421,710
39 8,751,861	18,352,146	257,163	822,389	524,869	87,949	15,025,755	152,953	40,697	33,183	1,407,188	19,751,188	4,637,484
40 2,088,863	2,042,393	103,521	201,777	405,910	16,545	965,835	24,086	10,302	5,150	309,267	2,259,783	1,277,403
41 6,094,450	11,214,390	248,102	522,742	1,428,645	116,187	7,549,211	164,909	21,497	1,165	1,161,932	12,798,077	5,132,679
42 4,452,842	6,137,357	184,461	64,263	1,126,680	62,507	4,416,811	24,248	17,978	6,373	234,136	6,610,969	2,131,651
43 31,018,411	20,300,274	588,053	499,565	4,314,684	212,683	12,979,480	219,785	81,528	14,251	1,389,245	22,822,810	9,629,647
44 13,014,494	6,888,306	66,968	24,668	659,584	66,222	5,875,409	3,000	50,079		142,338	8,237,165	2,295,534
45 180,918	207,433	16,040	6,524	44,071	2,855	116,714	7,740	649		12,840	238,468	118,899
46 1,306,114	2,280,612	77,969	132,378	524,530	14,857	1,180,468	26,708	2,565		321,139	2,711,213	1,515,888
47 1,979,076	1,896,952	60,800	44,043	522,078	30,720	1,071,294	18,800	9,620		139,542	2,111,208	1,009,194
48 2,455,288	2,363,064	155,942	120,180	760,385	53,286	1,018,883	33,484	11,034	985	208,885	2,757,762	1,685,593
49 859,129	978,164	27,878	31,130	178,333	10,006	565,436	8,560	2,914	2,627	161,280	1,180,898	605,456
50 71,764	201,740	13,000	14,874	36,048	1,639	113,103	6,653	339		16,089	231,884	117,142
51 24,201,532	24,937,852	762,884	1,360,742	6,412,671	233,368	13,395,080	260,876	169,782	37,172	2,315,277	26,826,177	13,197,729
52 289,762	562,107	23,110	7,739	245,482	15,920	210,402	29,510	1,115		28,879	696,572	470,250
53 84,866	119,180	9,662	10,766	19,784	1,480	43,415	4,640	197		29,246	155,318	110,423
54 1,066	40,230	1,992		14,745	1,847	15,632	57			3,337	45,058	27,579
55 1,581,612	1,250,894	28,630	15,190	189,558	29,226	906,066	150	4,414	1,593	76,157	1,469,469	534,177
56 659,251	1,119,375	67,162	73,075	221,757	7,783	566,508	31,294	1,209	24,672	126,930	1,316,861	745,585
57 84,200	86,973	2,240	1,976	49,081	3,909	23,260	1,172	744	200	4,391	99,522	72,353
58 109,771	142,098	19,340	37,050	14,596	166	61,750	3,318	83		5,795	164,437	102,521
59 180,844	142,939	21,990	4,916	35,648	745	86,522	470	1,037		8,711	142,973	75,706
60 383,331	576,368	18,136	39,445	111,923	3,894	309,361	11,181	1,008	12,110	69,310	676,845	362,590
61 18,453,727	48,852,744	488,994	316,182	1,271,182	330,242	45,259,329	25,140	87,302	546	1,073,827	51,110,681	5,521,110
62 143,276,987	123,396,892	5,413,640	5,306,986	33,156,824	2,689,463	61,120,725	1,065,152	589,672	1,059,200	12,995,230	138,578,993	74,768,805
63 971,515	1,584,835	49,408	59,403	229,532	3,206	1,067,726	71,349	1,976	20,370	81,865	1,929,470	858,538
64 2,881,103	6,726,981	170,894	255,918	1,014,719	17,984	4,555,098	83,640	17,676	16,969	594,093	7,213,437	2,640,355
65 22,383,174	25,169,458	887,571	867,002	8,099,683	317,915	12,183,305	313,768	116,333	55,147	2,328,734	27,900,262	15,399,042
66 3,657,369	5,102,485	381,241	286,240	44,924	44,924	2,649,280	89,960	10,300	10,459	445,808	5,797,373	3,108,169
67 131,789,940	13,938,452	631,984	935,387	2,967,342	5,394,978	814,706	580,035	926,147	3,725	1,684,148	21,052,100	14,842,416

* Same number reported for one or more other months.

TABLE II.—DETAIL STATEMENT FOR THE

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, supts. and managers.	Clerks.		Average number.	Wage earners.		Total.	16 and over.		Under 16.				
					Male.	Female.		Maximum month.	Minimum month.		Male.	Female.	Male.	Female.			
															Number.		
1 Glass.....	11	3,086	3	38	98	40	3,507	Ap ¹ 4,396	Se 1,441	4,385	3,975	203	202	5	6,638		
2 Gloves and mittens, leather.....	29	1,403	33	33	64	24	1,309	No 1,355	Ap 1,272	1,345	456	838	17	34	637		
3 Gold and silver, leaf and foil.....	7	159	6	7	.....	3	143	Se ¹ 153	Ja ¹ 124	126	62	58	5	1	13	
4 Grease and tallow.....	36	959	30	34	100	11	778	Se 809	My 693	849	827	20	2	.....	2,842	
5 Hand stamps and stencils and brands.....	33	284	35	17	33	23	176	No 194	Ap 161	194	154	27	13	.....	101	
6 Hats and caps, other than felt, straw, and wool.....	38	574	48	21	29	13	463	Oc 501	Fe 422	509	357	145	5	2	61		
7 Hats, fur-felt.....	10	123	9	1	11	3	99	De 111	Jy 93	111	61	50	.....	.....	20
8 Hosiery and knit goods.....	43	3,141	40	52	103	33	2,913	No 3,091	Ja 2,078	3,137	938	1,987	53	189	3,452		
9 Ice, manufactured.....	83	1,013	25	106	62	26	804	Au 1,134	Ja 479	730	728	1	1	.....	13,288	
10 Ink, printing.....	7	80	3	12	28	5	88	De ¹ 39	Ja ¹ 38	39	34	1	4	.....	185	
11 Iron and steel, blast furnaces.....	6	2,927	.....	341	56	2,493	De 2,997	Ja 2,053	2,997	2,997	.....	.....	.....	.....	70,453
12 Iron and steel, steel works and rolling mills.....	24	10,437	3	290	1,408	152	17,584	De 22,141	Mh 15,381	22,146	22,101	25	20	.....	152,770	
13 Jewelry.....	67	1,280	69	46	100	99	990	De 1,052	My 943	1,067	890	148	15	14	367		
14 Kaolin and ground earths.....	7	123	3	13	25	6	76	Oc 89	Ja 61	73	67	6	.....	.....	1,558
15 Lapidary work.....	3	18	2	.....	.....	2	14	No 10	Ja ¹ 13	13	12	.....	1	.....	6
16 Leather goods.....	168	3,569	172	115	253	80	2,949	Mh 3,107	Je 2,764	3,026	2,619	373	19	15	2,200		
17 Leather, tanned, curried, and finished.....	29	3,104	26	53	99	15	3,001	De 3,208	Je 2,839	3,208	3,203	5	.....	.....	6,769
18 Lime.....	10	572	12	22	23	4	511	Au 623	Ja 399	487	487	.....	.....	.....	794
19 Liquors, distilled.....	9	851	1	31	59	10	750	De 809	My 696	813	707	46	.....	.....	3,908
20 Liquors, malt.....	100	5,361	25	337	574	27	4,398	Jy 4,698	Ja 4,198	4,313	4,229	60	24	.....	27,900	
21 Liquors, vinous.....	12	17	14	.....	.....	3	3	Oc ¹ 6	Ja ¹ 2	6	6	.....	.....	.....	2
22 Lumber and timber products.....	814	10,025	825	638	783	212	16,567	No 17,596	Ja 15,003	18,122	17,768	153	199	2	52,015		
23 Marble and stone work.....	278	2,821	324	110	111	44	2,226	Se 2,401	Ja 1,702	2,311	2,301	1	4	.....	5,008	
24 Mattresses and spring beds.....	86	1,036	85	36	55	29	831	Oc 974	Ja 704	832	651	170	10	1	849		
25 Millinery and lace goods.....	103	3,987	105	135	244	175	3,328	Mh 4,056	Je 2,044	3,144	592	2,370	29	153	549		
26 Mirrors.....	10	390	4	14	14	11	353	De 393	Fe ¹ 334	393	392	1	.....	.....	370
27 Models and patterns, not including paper patterns.....	61	585	92	23	25	19	420	De 468	Jy 302	472	443	20	9	.....	701	
28 Musical instruments and materials, not specified.....	30	425	35	19	20	15	336	No 383	Jy 290	370	351	11	8	.....	206	
29 Musical instruments, pianos and organs and materials.....	68	0,028	18	199	455	179	8,777	Oc 9,293	Ja 8,341	9,187	8,361	503	204	59	8,123		
30 Paint and varnish.....	74	2,906	31	204	671	208	1,792	Mh 1,905	Ja 1,601	1,855	1,650	190	8	7	7,108		
31 Paper and wood pulp.....	19	1,542	3	50	69	23	1,397	No 1,541	Ja 1,183	1,575	1,552	19	4	.....	15,169	
32 Paper goods, not elsewhere specified.....	40	1,059	27	67	155	93	1,317	My 1,356	Ja 1,287	1,474	555	372	1	40	869		
33 Patent medicines and compounds and druggists' preparations.....	359	3,002	249	303	759	722	1,809	De 2,040	Ja 1,720	2,008	893	1,008	13	154	3,234		
34 Pens, fountain, stylographic, and gold.....	7	65	5	4	14	7	35	Au 88	Ja 32	33	29	4	.....	.....	14
35 Photographic apparatus and materials.....	13	350	8	22	22	20	284	Oc 322	Je 260	304	143	159	2	.....	430	
36 Photo-engraving.....	27	1,561	8	72	286	81	1,114	De 1,246	Fe 1,003	1,256	1,014	233	9	.....	696	
37 Pottery, terra-cotta, and fire-clay products.....	39	3,474	23	70	183	32	3,157	Oc 3,528	Ja 2,552	3,431	3,385	42	4	.....	7,995	
38 Printing and publishing.....	2,008	43,074	2,384	2,020	6,573	3,447	28,644	De 29,892	Je 27,869	30,054	22,269	7,010	561	214	20,975		
39 Pumps, not including steam pumps.....	14	348	7	31	21	7	282	My 290	Se 252	292	290	.....	.....	.....	228
40 Rubber goods, not elsewhere specified.....	13	145	8	9	7	17	104	De 116	My 95	115	63	52	.....	.....	293
41 Scales and balances.....	13	300	7	18	22	11	248	De 275	Au 224	275	209	5	1	.....	236	
42 Sewing machines, cases, and attachments.....	7	2,073	1	37	229	93	1,713	De 1,939	Jy 1,526	1,939	1,857	77	5	.....	2,366	
43 Shipbuilding, including boat building.....	23	470	24	16	13	4	413	Ap 696	No 297	554	553	1	.....	.....	1,113
44 Show cases.....	16	442	18	10	21	7	386	No 400	Ja 361	398	392	2	4	.....	419	
45 Signs and advertising novelties.....	51	1,835	25	72	376	72	1,290	Je 1,384	Ja 1,101	1,348	941	351	32	24	781		
46 Slaughtering and meat packing.....	109	32,642	93	246	5,148	450	20,705	De 29,652	My 24,293	28,755	25,537	3,175	40	3	56,651		
47 Smelting and refining, zinc.....	5	2,034	2	34	71	5	1,922	De 2,066	Mh 1,070	2,090	2,052	.....	.....	.....	7,485
48 Smelting and refining, not from the ore.....	11	423	4	23	19	8	369	De 432	Ap 292	432	432	.....	.....	.....	1,763
49 Soap.....	34	3,408	20	75	908	217	2,188	No 2,303	My 2,075	2,399	1,671	597	2	87	5,155		
50 Steam packing.....	15	160	8	14	19	11	108	De 139	Mh 90	139	137	2	.....	.....	146
51 Stereotyping and electrotyping.....	21	747	13	37	85	20	592	No 610	Au 571	602	583	3	10	.....	725	
52 Stoves and furnaces, including gas and oil stoves.....	71	5,223	28	173	424	99	4,499	Je 4,888	Ja 3,572	4,688	4,652	1	35	.....	4,983	
53 Surgical appliances and artificial limbs.....	20	820	19	40	150	75	536	De 547	Jy 518	547	275	263	9	.....	595	
54 Tobacco manufactures.....	1,044	10,707	2,127	132	336	78	8,034	De 8,461	Ja 7,020	8,688	6,004	2,508	145	31	878		
55 Type founding and printing materials.....	10	588	9	37	81	23	438	Oc 467	Ja ¹ 403	450	357	89	4	.....	391	
56 Wall paper.....	5	389	2	15	69	13	290	De 347	Au 243	347	287	59	.....	.....	492
57 Wall plaster.....	6	92	2	4	3	3	80	Ap 87	No 74	81	81	.....	.....	.....	414
58 Woolen, worsted, and felt goods, and wool hats.....	9	543	6	22	13	3	499	No 518	Ap 482	513	353	154	4	2	1,342		
59 All other industries.....	1,397	44,544	1,078	1,659	4,397	1,616	35,794	.....	.....	.....	.....	.....	.....	.....	96,122

¹ Same number reported for one or more other months.

² All other industries embrace—

Artists' materials.....	0	Drug grinding.....	2	Hair work.....	40
Awnings, tents, and sails.....	45	Dyeing and finishing textiles.....	12	Hammocks.....	1
Axle grease.....	3	Dyestuffs and extracts.....	2	Hat and cap materials.....	2
Beet sugar.....	1	Engravers' materials.....	3	Hats, straw.....	2
Belting and hose, woven and rubber.....	4	Engraving and die-sinking.....	17	Horseshoes, not made in steel works or rolling mills.....	2
Butter, reworking.....	4	Engraving, wood.....	13	House-furnishing goods, not elsewhere specified.....	27
Candles.....	1	Fertilizers.....	11	Ink, writing.....	9
Card cutting and designing.....	4	Firearms and ammunition.....	4	Instruments, professional and scientific.....	26
Carriages and sleds, children's.....	6	Flavoring extracts.....	30	Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	11
Cars, street-railroad, not including operations of railroad companies.....	2	Food preparations.....	110	Iron and steel, doors and shutters.....	17
Cash registers and calculating machines.....	9	Foundry supplies.....	6	Iron and steel forgings.....	3
Charcoal.....	3	Fuel, manufactured.....	1	Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.....	6
China decorating.....	14	Furs, dressed.....	3	Iron and steel pipe, wrought.....	3
Chocolate and cocoa products.....	1	Galvanizing.....	7	Jewelry and instrument cases.....	12
Clothing, horse.....	2	Glass, cutting, staining, and ornamenting.....	49	Labels and tags.....	.....
Clothing, men's, buttonholes.....	10	Glucose and starch.....	5	.....	.....
Coko.....	2	Glue.....	9	.....	.....
Cordials and sirups.....	10	Gold and silver, reducing and refining, not from the ore.....	3

STATISTICS OF MANUFACTURES.

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STATE, BY INDUSTRIES: 1909—Continued.

	Capital.	EXPENSES.										Value of products.	Value added by manufacture.	
		Services.					Materials.		Miscellaneous.					
		Total.	Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.			
1	\$7,738,236	\$4,604,447	\$126,669	\$104,784	\$2,181,683	\$468,582	\$1,072,872	\$1,320	\$25,634	\$536	\$682,367	\$5,047,333	\$3,505,879	
2	1,093,490	2,331,900	79,176	90,287	518,862	19,114	1,459,298	22,997	7,952	15,000	119,214	2,522,963	1,044,551	
3	65,747	209,833	14,050	1,274	61,183	1,163	126,702	3,060	174	.....	2,227	225,806	97,941
4	2,852,240	5,076,472	91,285	132,282	531,365	154,921	3,910,127	9,345	13,259	400	233,488	5,589,617	1,524,569	
5	295,106	396,973	26,665	30,714	102,930	4,253	165,074	22,548	938	1,990	41,861	478,911	309,584	
6	279,637	902,607	37,409	26,320	266,879	5,978	472,532	30,171	963	5,286	57,009	1,046,485	567,975	
7	70,007	250,898	1,560	10,650	70,990	1,774	153,163	9,732	227	.....	2,802	286,721	131,784
8	5,115,992	4,938,869	105,179	115,841	1,116,476	60,391	3,175,974	38,128	14,957	38,825	277,088	5,946,737	2,714,372	
9	5,574,739	1,424,435	145,830	40,240	584,166	291,192	150,738	7,298	26,012	3,682	219,271	1,928,323	1,486,393	
10	254,387	316,498	29,600	42,967	25,508	5,394	168,869	4,320	939	.....	49,382	415,025	260,772
11	52,389,822	34,196,011	174,841	320,726	1,792,965	12,256,101	18,662,361	.....	184,249	.....	814,768	28,299,697	7,391,435
12	69,682,495	75,221,710	880,917	1,414,278	12,962,087	3,598,585	52,645,878	5,800	267,560	.....	3,446,575	86,608,187	30,363,674
13	1,822,666	2,358,271	94,446	115,277	650,233	16,727	1,247,125	68,723	5,706	2,006	158,028	2,779,962	1,516,110	
14	687,177	368,440	26,720	67,474	37,198	10,147	157,617	3,230	2,260	.....	63,794	431,352	263,588
15	84,007	70,525	.....	710	12,974	262	52,910	1,140	56	.....	2,477	87,883	34,721
16	5,359,975	7,985,071	218,990	279,004	1,633,407	56,046	5,078,924	132,987	25,214	4,990	555,509	8,948,324	3,813,354	
17	15,974,832	14,736,180	159,964	116,908	1,582,630	511,707	11,978,902	26,278	35,181	7,310	677,900	14,911,782	2,781,173	
18	1,258,141	591,605	40,717	23,594	282,967	88,878	85,442	488	7,608	.....	61,811	667,976	513,656
19	7,500,330	53,219,662	129,695	71,463	473,685	247,594	8,961,701	4,451	42,779,367	24,235	523,067	55,199,579	45,990,579	
20	66,141,165	23,618,940	1,018,247	680,966	3,473,300	591,827	6,441,866	.....	5,502,471	8,601	5,902,162	28,449,148	21,415,955
21	34,150	15,846	.....	.....	1,989	4	12,904	236	84	.....	629	28,711	15,803
22	29,777,623	41,125,558	1,132,843	828,257	9,109,584	356,832	26,907,364	306,484	146,020	234,491	2,103,683	44,361,804	17,687,606	
23	687,177	46,371	231,300	137,570	1,760,107	87,010	2,943,239	60,716	20,408	.....	123,782	297,239	2,781,136
24	1,150,945	2,503,832	76,020	84,131	447,691	18,876	1,614,888	60,520	3,864	4,377	193,465	2,860,402	1,226,278	
25	2,188,576	6,444,818	293,213	352,067	1,383,832	31,217	3,766,079	168,758	2,656	.....	439,129	7,281,914	3,484,618
26	447,280	992,144	22,854	17,435	231,681	11,086	623,702	19,545	2,182	400	63,259	1,106,480	471,692	
27	520,739	701,416	45,643	33,302	308,255	14,507	188,893	34,661	1,252	1,455	73,448	889,437	686,037	
28	511,602	502,478	30,041	21,206	200,606	8,797	169,675	18,500	2,192	72	45,389	629,163	450,691	
29	27,718,851	16,686,065	631,455	583,811	5,009,042	158,028	8,484,403	89,168	95,084	14,144	1,620,930	19,176,328	10,533,897	
30	15,725,376	17,926,283	608,050	1,048,943	1,114,298	149,280	12,752,331	61,785	72,083	6,144	2,113,369	20,434,291	7,532,680	
31	8,400,333	4,567,670	118,514	81,299	727,420	320,352	2,779,088	8,080	17,723	3,927	511,267	4,983,075	1,883,635	
32	2,260,405	3,435,708	149,076	182,130	546,165	32,582	1,964,579	69,873	46,277	70,577	374,449	3,779,297	1,782,136	
33	7,888,944	10,742,989	682,117	1,104,065	804,761	73,308	4,339,710	189,928	39,313	70,795	3,474,992	13,114,307	8,701,289	
34	117,164	41,815	3,900	21,266	23,224	734	67,551	3,900	166	8,850	12,224	170,467	102,182	
35	708,269	642,709	54,005	27,006	156,562	6,402	311,382	9,126	3,919	500	73,807	739,857	422,073	
36	1,390,856	2,268,578	177,632	297,753	949,109	31,342	502,413	68,385	6,488	25,560	214,896	2,678,304	2,144,549	
37	14,900,981	3,946,183	196,795	186,652	1,884,879	433,231	693,215	3,894	23,434	45,566	479,117	4,614,728	3,488,282	
38	60,084,133	73,964,422	4,788,751	7,583,416	18,486,924	845,568	23,834,405	1,708,047	259,085	4,738,140	11,773,086	87,247,090	62,567,117	
39	604,286	641,106	46,371	21,435	179,136	11,363	316,168	6,770	3,157	246	56,440	658,554	331,003	
40	251,977	323,529	15,900	11,970	52,875	5,448	194,528	12,517	402	.....	29,829	381,363	181,387
41	515,477	528,831	39,870	25,103	151,166	7,796	237,429	7,579	3,299	.....	56,589	574,420	329,195
42	4,430,468	3,306,683	114,404	151,014	1,113,885	48,412	1,062,084	2,938	15,757	.....	798,209	3,621,554	2,511,078
43	2,060,884	532,277	22,772	11,079	251,594	21,423	177,332	3,179	12,595	288	32,015	583,783	385,028	
44	539,256	691,413	23,700	32,779	247,869	9,125	280,525	10,525	3,025	22,175	61,690	829,472	539,822	
45	2,693,629	2,915,025	158,216	233,602	750,349	18,179	967,165	57,780	4,993	75,229	649,512	3,271,331	2,285,987	
46	131,026,247	378,189,429	1,007,485	5,432,584	14,601,961	1,485,207	342,490,800	165,663	519,147	230,732	12,255,870	389,594,906	45,618,899	
47	7,596,278	8,409,661	200,891	111,765	1,275,162	629,206	5,866,878	6,770	27,729	.....	298,330	9,003,624	2,507,840
48	1,603,000	3,638,984	69,929	38,369	206,679	78,503	3,155,613	6,629	4,246	.....	79,017	3,929,755	695,639
49	11,693,653	18,835,398	219,102	1,136,533	1,052,608	262,319	18,685,841	28,660	49,811	19,468	2,381,056	20,180,799	6,232,639	
50	156,862	355,569	20,369	21,375	61,942	5,130	188,462	9,835	343	29,717	18,406	407,890	214,308	
51	777,366	1,156,678	106,926	79,798	472,376	26,593	289,335	50,493	2,122	4,784	124,251	1,282,292	966,364	
52	9,862,626	9,025,880	366,171	509,368	2,957,048	143,358	3,712,579	33,213	46,130	18,531	1,239,486	10,237,335	6,431,398	
53	1,673,702	1,856,796	83,031	288,851	284,512	13,947	906,887	23,743	4,719	1,150	248,956	2,098,942	1,178,108	
54	12,794,393	18,230,593	257,208	560,436	4,215,848	66,700	8,535,962	250,791	2,410,665	3,486	1,929,497	21,870,252	13,267,590	
55	1,852,184	1,188,289	100,600	100,696	302,566	12,926	362,459	46,703	3,764	5,562	253,023	1,247,937	872,552	
56	1,139,847	1,168,877	64,020	56,273	173,127	14,864	686,779	7,790	.....	.....	161,776	1,366,763	665,120
57	261,035	177,930	7,758	5,979	33,361	7,825	108,797	1,936	.....	.....	10,148	203,312	86,690
58	1,063,075	1,190,230	60,938	14,084	236,760	21,119	752,037	2,720	.....	.....	96,685	1,314,100	540,944
59	169,900,392	181,930,730	4,310,009	5,539,512	20,944,408	7,892,285	127,046,368	1,181,455	832,792	209,172	13,974,734	205,487,461	70,528,808	

* All other industries embrace—Continued.
 Lard, refined, not made in slaughtering and meat-packing establishments. 1
 Lasts. 2
 Lead, bar, pipe and sheet. 2
 Looking-glass and picture frames. 68
 Malt. 12
 Matches. 1
 Millstones. 1
 Mineral and soda waters. 276
 Moving pictures. 3
 Mucilage and paste. 8
 Oil, cottonseed, and cake. 2
 Oil, linseed. 5
 Oil, not elsewhere specified. 11
 Oilcloth and linoleum. 1
 Oleomargarine. 3
 Optical goods. 8
 Paper patterns. 3
 Paving materials. 7
 Peanuts, grading, roasting, cleaning, and shelling. 1

Petroleum, refining. 7
 Phonographs and graphophones. 1
 Pipes, tobacco. 4
 Roofing materials. 17
 Rules, ivory and wood. 1
 Safes and vaults. 3
 Sand and emery paper and cloth. 1
 Saws. 8
 Screws, machine. 2
 Screws, wood. 2
 Shoddy. 1
 Silk and silk goods, including throwsters. 2
 Silverware and plated ware. 1
 Smelting and refining, lead. 4
 Soda-water apparatus. 9
 Sporting and athletic goods. 24
 Springs, steel, car and carriage. 5
 Stationery goods, not elsewhere specified. 21
 Statuary and art goods. 12
 Sugar and molasses. 1

Sulphuric, nitric, and mixed acids. 2
 Tin plate and terneplate. 1
 Tin foil. 2
 Toys and games. 19
 Typewriters and supplies. 11
 Umbrellas and canes. 4
 Upholstering materials. 10
 Vault lights and ventilators. 5
 Vinegar and cider. 15
 Washing machines and clothes wringers. 13
 Waste. 2
 Whips. 2
 Windmills. 11
 Window shades and fixtures. 36
 Wire. 7
 Wirework, including wire rope and cable. 60
 Wood preserving. 3
 Wood, turned and carved. 40
 Wool pulling. 16
 Wool scouring. 7

TABLE III.—DETAIL STATEMENT FOR CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES, CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES.

CHICAGO.

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.						Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.					
					Male.	Female.	Total.	Male.	Female.		Under 16.	Male.	Female.	Male.	Female.			
																Male.	Female.	
1 All Industries.....	9,056	356,954	8,156	10,205	33,531	11,085	293,977	231,461	57,545	4,971	314,706	248,144	61,286	2,252	3,022	525,238		
2 Artificial stone.....	19	192	20	16	3	3	150	150	.....	.....	148	148	.....	.....	.....	82
3 Automobiles, including bodies and parts...	41	1,725	17	80	136	32	1,460	1,440	20	.....	1,560	1,535	21	.....	.....	734
4 Bags, other than paper.....	6	213	4	6	8	6	180	84	105	.....	198	88	110	.....	.....	157
5 Baking powders and yeast.....	16	640	8	38	285	87	522	255	251	6	560	282	288	.....	6	1,142	
6 Baskets, and rattan and willow ware.....	10	52	11	.....	.....	.....	41	37	4	.....	44	40	4	.....	.....	16
7 Belting and hose, leather.....	11	493	9	25	116	20	293	227	6	.....	247	241	6	.....	.....	430
8 Boots and shoes, including out stock and findings.	31	3,328	29	48	137	85	3,027	1,983	856	189	3,110	2,042	884	89	104	1,103		
9 Boxes, cigar.....	0	348	9	8	21	6	304	114	155	35	310	120	163	9	27	214		
10 Boxes, fancy and paper.....	48	3,984	22	131	128	94	3,600	1,086	2,111	412	3,013	1,179	2,290	44	400	1,575		
11 Brass and bronze products.....	56	1,430	38	78	103	44	1,167	1,142	10	6	1,300	1,281	21	7	.....	1,099	
12 Bread and other bakery products.....	1,177	8,842	1,246	109	677	373	6,487	4,870	1,474	84	6,068	5,012	1,509	31	56	3,847		
13 Brick and tile.....	7	657	0	21	14	4	612	597	.....	15	745	727	.....	.....	.....	3,225
14 Brooms.....	28	282	34	15	6	5	222	181	38	3	323	293	56	4	.....	169	
15 Brushes.....	28	334	26	12	15	6	275	190	79	6	280	104	80	2	4	94		
16 Buttons.....	13	231	14	6	5	16	190	81	102	7	169	72	91	5	1	39		
17 Calcium lights.....	3	12	1	2	.....	2	7	.....	.....	.....	7	7	.....	.....	.....	10
18 Canning and preserving.....	47	1,107	41	40	89	33	904	455	431	18	906	456	432	9	9	1,274		
19 Carpets, rag.....	25	205	24	6	12	.....	103	145	14	4	168	149	15	4	.....	73
20 Carriages and wagons and materials.....	120	2,263	139	60	81	18	1,905	1,945	20	.....	1,942	1,922	20	.....	.....	3,022
21 Cars and general shop construction and repairs by steam-railroad companies.	22	11,562	.....	141	343	19	11,059	11,008	49	4	12,100	12,042	54	4	.....	7,232
22 Cars and general shop construction and repairs by street-railroad companies.	7	1,721	.....	31	25	1	1,664	1,661	3	.....	1,912	1,908	4	.....	.....	1,584
23 Cars, steam-railroad, not including operations of railroad companies.	18	9,226	.....	160	473	40	8,553	8,508	45	.....	9,731	9,680	51	.....	.....	14,576
24 Chemicals.....	10	218	2	15	36	22	143	132	11	.....	162	150	12	.....	.....	780
25 Clocks and watches, including cases and materials.	5	145	3	9	20	4	109	103	3	3	138	130	4	1	3	26		
26 Cloth, sponging and refinishing.....	6	106	4	4	3	4	91	90	1	.....	94	93	1	.....	.....	36
27 Clothing, men's, including shirts.....	678	38,370	330	357	2,443	1,125	33,615	16,639	16,068	908	35,820	17,729	17,140	260	691	2,916		
28 Clothing, women's.....	204	6,666	254	123	451	223	5,615	1,870	3,689	56	5,980	1,990	3,930	0	54	668		
29 Coffee and spice, roasting and grinding.....	32	1,775	22	67	596	84	1,008	561	415	30	1,030	575	424	18	13	2,575		
30 Coffins, burial cases, and undertakers' goods.	13	733	5	31	113	8	576	426	125	25	561	415	121	0	10	628		
31 Confectionery.....	87	3,865	53	95	310	166	3,241	1,118	1,006	217	3,826	1,320	2,260	8	248	3,045		
32 Cooperage and wooden goods, not elsewhere specified.	37	1,269	32	37	20	14	1,100	1,160	.....	6	1,205	1,199	.....	.....	.....	1,984
33 Copper, tin, and sheet-iron products.....	268	4,610	256	173	216	106	3,859	3,458	370	31	4,003	3,589	383	22	9	2,839		
34 Corsets.....	10	1,124	5	20	39	55	1,005	67	818	120	974	65	798	25	91	120		
35 Cutlery and tools, not elsewhere specified..	53	1,107	43	47	56	39	982	898	61	23	1,134	1,038	70	20	6	1,499		
36 Dairymen's, poultrymen's, and apiculturists' supplies.	7	70	5	6	7	4	49	46	2	1	64	60	3	1	.....	79	
37 Dentists' materials.....	10	85	5	9	8	15	48	39	7	2	52	42	8	2	.....	35	
38 Electrical machinery, apparatus, and supplies.	123	7,333	45	257	653	282	6,096	4,255	1,792	49	5,988	4,178	1,762	40	8	6,443		
39 Electroplating.....	34	374	40	12	7	5	310	299	2	0	325	314	2	9	.....	422	
40 Fancy articles, not elsewhere specified.....	40	603	29	42	53	41	438	243	181	14	514	285	213	8	8	210		
41 Fire extinguishers, chemical.....	5	54	2	5	16	3	28	25	3	.....	32	29	3	.....	.....	11
42 Foundry and machine-shop products.....	669	36,808	338	1,442	3,849	684	31,055	30,154	808	93	35,010	33,983	910	100	11	54,876		
43 Fur goods.....	59	455	58	21	56	12	308	173	132	3	377	212	161	1	8	59		
44 Furnishing goods, men's.....	38	2,273	38	44	202	84	1,905	215	1,621	69	2,016	228	1,710	4	68	582		
45 Furniture and refrigerators.....	202	11,007	144	310	584	183	9,876	9,491	237	148	10,270	9,874	244	148	4	14,371		
46 Gas and electric fixtures and lamps and reflectors.	63	2,068	30	107	217	112	1,802	1,200	372	24	1,785	1,345	414	15	11	1,060		
47 Gloves and mittens, leather.....	25	1,223	29	22	44	19	1,109	394	665	50	1,130	404	684	17	34	570		
48 Gold and silver, leaf and foil.....	7	159	0	7	.....	3	143	70	66	7	126	62	58	5	1	13	
49 Grease and tallow.....	10	773	7	21	86	10	649	629	18	2	714	692	20	2	.....	2,207	
50 Hand stamps and stonells and brands.....	27	273	29	17	33	22	172	137	23	12	190	151	26	13	.....	100	
51 Hats and caps, other than felt, straw, and wool.	38	574	48	21	29	13	463	325	132	6	509	357	145	5	2	61		
52 Hosiery and knit goods.....	29	837	36	20	31	7	743	119	565	59	802	128	610	3	61	167		
53 Ice, manufactured.....	6	229	.....	13	9	1	200	200	.....	.....	192	192	.....	.....	.....	3,024
54 Ink, printing.....	7	86	3	12	28	5	38	33	1	4	39	34	1	4	.....	185	
55 Iron and steel, steel works and rolling mills.	6	7,089	.....	106	538	62	6,983	6,983	.....	.....	7,514	7,514	.....	.....	.....	79,456
56 Jewelry.....	55	1,169	55	38	101	65	910	754	131	25	970	812	141	12	14	294		
57 Lapidary work.....	3	18	2	.....	.....	2	14	13	.....	1	13	12	.....	.....	6	
58 Leather goods.....	99	2,581	96	83	171	53	2,178	1,810	340	28	2,251	1,871	350	15	15	804		
59 Leather, tanned, curried, and finished.....	24	2,841	23	48	84	12	2,674	2,671	3	.....	2,875	2,872	3	.....	.....	6,212
60 Liquors, malt.....	45	3,450	2	171	399	11	2,867	2,815	52	.....	2,835	2,784	51	.....	.....	15,666
61 Lumber and timber products.....	105	13,580	110	390	573	136	10,462	10,305	21	136	10,774	10,612	25	187	.....	25,917	
62 Marble and stone work.....	107	1,040	108	72	49	23	1,388	1,386	1	1	1,413	1,411	1	1	.....	3,012	
63 Mattresses and spring beds.....	58	335	53	29	44	26	683	538	134	11	680	536	138	10	1	465		

STATISTICS OF MANUFACTURES.

745

AND TOTALS FOR ALL INDUSTRIES IN CITIES OF 10,000 BUT LESS THAN 50,000 INHABITANTS: 1909.

CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES.

CHICAGO.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.	
	Total.	Services.			Materials.		Miscellaneous.						
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.			
1	\$971,840,545	\$1,156,530,537	\$26,548,124	\$39,376,717	\$174,112,069	\$27,663,535	\$765,806,188	\$9,870,326	\$10,569,336	\$12,783,076	\$89,801,166	\$1,281,171,181	\$487,701,458
2	240,095	294,472	18,485	2,044	103,926	2,125	143,705	3,605	785	19,197	355,938	210,106	
3	2,094,348	3,065,064	194,545	109,906	1,131,443	38,757	1,608,008	91,224	8,539	351,635	3,939,735	2,232,970	
4	575,574	805,618	14,500	9,600	175,042	4,060	680,973	4,442	1,453	5,488	965,442	280,409	
5	5,873,320	5,421,951	150,023	297,105	303,834	31,360	2,866,876	27,540	18,883	1,736,324	7,006,662	4,120,420	
6	29,473	64,175	.....	.....	26,277	385	33,339	2,520	265	1,391	81,357	47,633	
7	1,279,476	2,051,612	64,536	118,499	164,536	16,532	1,368,036	30,755	2,935	285,733	2,187,555	802,987	
8	3,580,595	8,783,902	146,664	178,141	1,919,794	34,547	6,010,142	79,618	12,089	402,867	9,855,302	3,810,613	
9	292,197	477,051	18,000	27,657	124,864	6,163	251,931	16,553	1,252	1,000	29,631	540,774	282,680
10	3,118,225	4,423,808	214,448	185,236	1,311,235	43,626	2,188,203	122,554	13,979	25,000	319,527	5,043,621	2,811,732
11	2,491,807	4,686,193	175,181	128,536	810,203	62,352	3,203,222	56,164	7,085	2,690	240,810	5,131,391	1,866,817
12	20,600,228	23,537,268	307,030	840,898	4,145,608	488,185	15,792,060	473,250	82,613	.....	1,437,624	26,006,238	10,627,993
13	2,210,037	925,015	45,950	15,936	559,214	152,716	57,347	.....	16,398	.....	78,354	1,172,271	962,208
14	249,943	576,576	17,704	7,432	118,294	2,924	399,432	8,255	1,047	8,620	12,808	680,003	277,647
15	440,034	794,717	28,456	17,140	163,064	3,011	512,763	10,128	1,550	.....	63,605	879,545	363,774
16	151,440	275,200	11,880	14,032	71,528	1,879	137,479	7,780	203	10,000	26,419	334,779	196,421
17	29,265	32,385	2,800	1,240	5,292	256	19,130	1,740	60	.....	1,867	26,729	7,343
18	2,057,986	3,437,986	99,314	103,877	395,177	37,760	2,495,025	55,246	12,925	9,808	228,854	3,826,530	1,236,745
19	87,343	169,388	9,630	4,675	68,144	5,532	37,899	8,546	371	700	23,801	206,142	162,717
20	7,616,150	4,377,039	118,249	75,899	1,253,481	54,300	2,547,686	63,420	39,213	1,530	223,261	5,203,015	2,601,029
21	9,558,282	15,358,825	236,505	330,605	7,304,671	621,838	6,688,242	.....	23,070	.....	153,894	15,358,825	8,048,745
22	3,061,331	2,747,078	40,620	23,466	1,068,627	29,801	1,489,889	1,250	19,156	.....	74,260	2,758,388	1,238,698
23	29,729,609	20,006,561	401,796	385,274	6,387,816	176,767	11,443,727	90,041	113,718	277,851	730,071	20,892,016	9,271,522
24	887,063	963,316	37,914	54,278	91,730	30,901	567,535	6,307	2,862	4,160	157,579	1,149,408	550,922
25	421,037	400,703	21,059	22,596	59,733	1,123	231,283	5,404	534	48	8,923	445,040	162,634
26	80,806	93,072	6,820	5,688	51,824	672	.....	13,300	201	.....	14,567	119,296	118,624
27	26,521,124	76,619,182	1,238,383	3,058,397	15,776,654	258,588	42,511,450	876,932	70,704	5,185,138	7,649,936	85,296,407	42,528,369
28	5,193,048	14,136,673	308,535	606,487	2,996,959	49,441	8,609,808	272,153	14,392	501,714	778,184	15,676,925	7,018,676
29	8,606,261	18,199,207	255,783	822,389	520,858	87,201	14,881,755	152,503	40,597	33,183	1,404,938	19,593,183	4,624,232
30	1,720,693	1,674,600	87,921	181,994	339,365	13,202	780,334	22,666	8,443	5,150	265,685	1,837,558	1,074,022
31	5,275,044	9,815,864	216,278	421,336	1,249,942	99,694	6,603,701	145,244	18,587	750	1,060,332	11,222,436	4,519,041
32	1,860,251	3,044,282	83,127	26,463	600,885	35,430	2,149,478	20,338	8,851	5,175	111,545	3,368,165	1,180,257
33	12,215,669	10,532,659	369,877	269,584	2,472,424	107,514	6,355,490	180,120	55,261	5,065	697,304	12,241,950	5,778,946
34	924,802	1,477,407	65,869	83,742	339,508	3,600	701,084	25,646	1,182	.....	256,776	1,778,921	1,074,237
35	1,796,438	1,634,318	116,686	83,834	553,864	34,039	646,366	29,477	8,372	985	161,695	1,895,418	1,215,013
36	179,200	257,710	7,660	18,300	36,920	905	146,320	3,250	623	200	48,532	339,735	192,510
37	71,764	201,740	13,000	14,874	36,043	1,639	113,103	6,653	339	.....	16,089	231,884	117,142
38	16,623,727	18,824,304	581,773	788,138	3,859,677	144,479	11,260,995	254,504	77,712	30,547	1,826,479	20,668,505	9,263,031
39	181,098	396,071	19,880	5,141	214,222	12,670	94,478	28,155	840	.....	21,585	484,045	376,897
40	641,101	1,101,255	66,262	73,075	218,480	7,325	560,872	30,874	1,183	18,845	1,289,110	1,299,110	721,113
41	109,771	142,098	19,340	37,050	14,596	166	61,750	3,318	89	.....	5,795	164,437	102,521
42	90,049,533	80,140,864	3,728,983	3,578,559	20,489,963	1,574,500	39,180,970	979,392	419,028	941,058	9,267,411	89,669,262	48,913,862
43	959,109	1,565,374	49,408	58,773	224,832	2,946	1,057,399	68,709	1,884	20,370	81,063	1,902,507	842,162
44	2,339,851	5,745,904	152,515	230,786	820,166	10,196	3,866,417	74,901	15,156	16,959	558,818	6,122,344	2,245,731
45	16,373,435	18,799,188	725,640	728,763	6,025,901	247,147	8,848,519	304,683	88,668	55,147	1,774,722	20,512,384	11,416,718
46	2,706,026	4,141,999	330,396	257,813	914,339	36,353	2,087,957	86,150	7,378	10,459	411,654	4,683,034	2,558,724
47	899,939	2,005,800	64,256	65,307	441,017	17,043	1,290,604	20,977	4,045	.....	102,545	2,181,260	873,698
48	65,747	209,833	14,050	1,274	61,183	1,163	126,702	3,060	174	.....	225,806	225,806	97,941
49	2,181,134	4,642,841	72,910	113,890	452,288	139,039	3,641,918	7,995	11,874	400	202,527	4,947,923	1,186,966
50	236,579	390,541	26,665	30,894	101,247	4,110	162,623	21,816	896	1,990	40,710	466,874	300,141
51	279,637	902,607	37,469	26,320	266,879	5,978	472,532	30,171	963	5,286	57,009	1,046,485	567,975
52	908,497	1,298,276	31,356	58,715	288,518	9,256	773,457	26,040	1,575	18,822	90,537	1,477,380	694,067
53	1,136,271	426,202	31,804	10,520	153,000	89,916	36,041	5,400	9,253	3,682	86,536	569,133	443,176
54	254,387	316,498	29,600	42,496	25,508	5,394	168,859	4,320	939	.....	49,332	415,025	250,772
55	32,576,734	37,399,885	344,061	634,303	5,603,458	1,805,881	27,217,511	5,800	158,378	.....	1,630,493	45,963,782	16,960,390
56	1,573,730	2,233,656	83,586	109,919	605,931	13,885	1,204,429	67,363	5,164	2,006	141,373	2,634,642	1,416,328
57	34,087	70,525	.....	716	12,974	252	52,910	1,140	56	.....	2,477	8,853	34,721
58	2,377,179	5,294,532	173,160	193,380	1,173,773	34,578	3,244,983	116,068	14,947	4,960	338,053	5,861,234	2,581,673
59	14,485,671	13,100,560	147,964	94,438	1,417,978	135,496	10,652,378	26,230	31,545	6,500	588,031	13,243,500	2,455,676
60	29,384,856	16,610,908	638,049	506,785	2,377,783	347,233	4,502,504	.....	4,109,156	.....	4,139,456	14,662,667	
61	17,694,605	30,360,578	820,189	627,766	6,148,864	253,931	20,513,864	237,334	101,109	187,828	1,469,990	32,708,725	11,940,890
62	2,537,400	3,370,739	160,818	68,744	1,136,923	53,858	1,659,866	41,604	12,069	100,257	136,030	3,239,750	2,216,026
63	837,173	2,089,270	62,620	72,840	371,003	15,226	1,333,631	55,656	2,599	1,859	178,835	2,377,332	1,028,475

TABLE III.—DETAIL STATEMENT FOR CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES, AND CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.

CHICAGO—Continued.

INDUSTRY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.									WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.				Pri- mary horse- power.	
		Total.	Propri- etors and firm members.	Salar- ied offi- cers, super- intend- ents, and man- agers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.			
					Male.	Fe- male.	Total.	16 and over.			Un- der 16.	Male.	Fe- male.	Male.		Fe- male.
								Male.	Fe- male.							
64 Models and patterns, not including paper patterns.	56	435	63	15	20	15	322	295	18	9	348	310	20	9	.....	494
65 Musical instruments and materials, not specified.	27	418	33	19	20	14	332	315	10	7	366	347	11	8	.....	200
66 Musical instruments, pianos and organs and materials.	37	5,792	12	107	343	121	5,209	4,770	266	167	5,471	5,017	270	146	29	4,677
67 Paint and varnish.	61	2,667	27	182	651	201	1,006	1,407	185	14	1,653	1,448	190	8	7	5,837
68 Paper goods, not elsewhere specified.	41	1,255	27	61	125	85	957	380	541	36	1,055	419	596	5	35	607
69 Patent medicines and compounds and druggists' preparations.	273	3,011	160	234	656	600	1,361	555	664	142	1,550	633	756	8	153	2,030
70 Photographs apparatus and materials.	13	350	8	22	22	20	284	133	140	2	304	143	150	2	.....	430
71 Photo-engraving.	21	1,180	4	62	185	57	878	816	63	0	940	874	57	0	.....	405
72 Printing and publishing.	1,395	33,439	1,005	1,569	5,585	2,904	22,326	10,707	5,023	536	23,344	17,532	5,245	381	186	20,162
73 Pumps, not including steam pumps.	6	74	1	13	6	2	52	51	.....	1	51	50	.....	1	.....	43
74 Rubber goods, not elsewhere specified.	13	145	8	9	7	17	104	57	47	.....	115	63	52	.....	280	
75 Shipbuilding, including boat building.	8	306	7	5	0	3	282	281	1	.....	429	428	1	.....	62,922	
76 Slaughtering and meat packing.	67	27,147	66	183	4,402	372	22,064	19,384	2,047	33	23,789	20,990	2,854	33	3	45,623
77 Smelting and refining, not from the ore.	7	127	4	13	12	7	91	91	.....	.....	102	.....	.....	.....	168	
78 Soap.	27	3,329	17	62	899	312	2,139	1,491	528	120	2,345	1,635	579	44	87	4,967
79 Steam packing.	15	160	8	14	19	11	108	106	2	.....	139	137	2	.....	146	
80 Stereotyping and electrotyping.	21	747	13	37	85	20	592	573	3	10	602	533	3	16	.....	725
81 Stoves and furnaces, including gas and oil stoves.	28	1,263	14	55	117	29	1,048	1,042	1	5	1,097	1,091	1	5	.....	337
82 Surgical appliances and artificial limbs.	24	807	13	40	150	75	520	264	256	0	539	269	261	9	.....	592
83 Tobacco manufactures.	1,050	6,758	1,111	97	268	02	5,220	3,304	1,874	42	5,684	3,598	2,038	28	20	733
84 Type founding and printing materials.	19	588	9	37	81	23	438	347	87	4	450	357	89	4	.....	391
85 All other industries ¹ .	1,305	60,504	920	2,044	5,458	1,596	50,477	40,987	8,032	858	53,628	43,525	9,198	389	516	159,447

¹ All other industries embrace: Agricultural implements, 4; artificial flowers and feathers and plumes, 23; artists' materials, 7; awnings, tents, and sails, 33; rabbit metal and solder, 15; bags, paper, 3; beet sugar, 1; bolting and hose, woven and rubber, 3; bicycles, motor cycles, and parts, 11; billiard tables and materials, 8; blacking and cleaning and polishing preparations, 50; bluing, 8; butter, cheese, and condensed milk, 5; butter, reworking, 2; candles, 1; card cutting and designing, 3; carriages and sleds, children's, 4; cash registers and calculating machines, 8; cement, 1; china decorating, 13; chocolate and cocoa products, 1; clothing, horse, 1; clothing, men's, buttonholes, 10; coke, 1; cordage and twine and jute and linen goods, 4; cordials and syrups, 9; cork, cutting, 4; cotton goods, including cotton small wares, 2; drug grinding, 1; dyeing and finishing textiles, 10; dyestuffs and extracts, 2; emery and other abrasive wheels, 4; enameling and japanning, 3; engravers' materials, 3; engraving and diesinking, 16; engraving, wood, 13; fertilizers, 4; files, 2; firearms and ammunition, 1; fireworks, 2; flags, banners, regalia, society badges, and emblems, 18; flavoring extracts, 19; flour-mill and gristmill products, 3; food preparations, 77; foundry supplies, 4; furs, dressed, 3; galvanizing, 4; gas, illuminating and heating, 2; glass, cutting, staining, and ornamenting, 4; glucose and starch, 1; glue, 6; gold and silver, reducing and refining, not from the ore, 3; hair work, 39; hammocks, 1; hat and cap material, 2; hats, fur-felt, 3; hats, straw, 2; horseshoes, not made in steel works or rolling mills, 1; house-furnishing goods, not elsewhere specified, 26; ink, writing, 9; instruments, professional and scientific, 24; iron and steel, blast furnaces, 5; iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills, 8; iron and steel, doors and shutters, 5; iron and steel forgings, 11; iron and steel, nails and spikes, out and wrought, including wire nails, not made in steel works or rolling mills, 4; iron and steel pipe, wrought, 1; jewelry

EAST ST. LOUIS.

1 All industries	139	6,005	92	156	422	83	5,252	5,032	156	64	7,280	6,974	214	82	10	23,773
2 Bread and other bakery products.	20	121	21	5	10	5	71	69	2	.....	71	69	2	.....	.....	49
3 Carriages and wagons and materials.	5	35	4	2	1	.....	28	28	.....	.....	27	27	.....	.....	.....	19
4 Copper, tin, and sheet-iron products.	14	92	17	.....	2	.....	73	73	.....	.....	93	93	.....	.....	.....	1,251
5 Foundry and machine-shop products.	11	925	3	25	35	5	857	848	6	3	1,098	1,086	8	4	.....	685
6 Lumber and timber products.	7	147	9	10	23	3	102	102	.....	.....	132	132	.....	.....	.....	51
7 Printing and publishing.	8	77	5	10	7	5	50	41	0	.....	51	42	9	.....	.....	.....
8 Tobacco manufactures.	12	23	12	.....	.....	.....	11	10	1	.....	17	16	1	.....	.....	.....
9 All other industries ¹ .	62	4,585	21	104	337	63	4,060	3,861	138	61	5,791	5,500	104	78	10	21,221

¹ All other industries embrace: Artificial stone, 3; awnings, tents, and sails, 1; baking powders and yeast, 2; brooms, 1; canning and preserving, 1; cars and general shop construction and repairs by steam-railroad companies, 3; cars and general shop construction and repairs by street-railroad companies, 1; cars, steam railroad, including operations of railroad companies, 1; chemicals, 2; clothing, women's, 1; cooperage and wooden goods, not elsewhere specified, 3; flour-mill and gristmill products, 6; food preparations, 1; foundry supplies, 2; furniture and refrigerators, 2; gas, illuminating and heating, 1; glass, 1; ice, manufactured, 2; iron and steel, steel works and

PEORIA.

1 All industries	283	7,323	242	312	574	214	5,981	5,213	722	46	6,201	5,413	742	39	7	18,296
2 Bread and other bakery products.	39	274	39	5	11	25	194	136	58	.....	193	136	57	.....	.....	172
3 Carriages and wagons and materials.	8	78	9	2	.....	4	63	63	.....	.....	69	69	.....	.....	.....	62
4 Cooperage and wooden goods, not elsewhere specified.	5	543	2	16	0	2	514	514	.....	.....	540	540	.....	.....	.....	910
5 Copper, tin, and sheet-iron products.	9	283	12	16	7	9	239	172	60	7	232	167	58	7	.....	196
6 Flour-mill and gristmill products.	4	54	6	2	7	5	34	34	.....	.....	35	35	.....	.....	.....	326
7 Foundry and machine-shop products.	20	488	10	35	13	10	420	419	1	.....	416	415	1	.....	.....	696
8 Leather goods.	4	55	7	1	7	3	37	37	.....	.....	37	37	.....	.....	.....	10
9 Liquors, distilled.	4	652	.....	17	40	7	532	549	33	.....	640	604	36	.....	.....	3,367
10 Liquors, malt.	3	228	.....	17	13	1	197	192	5	.....	189	184	5	.....	.....	990
11 Lumber and timber products.	6	100	7	10	5	2	166	166	.....	.....	191	191	.....	.....	.....	453
12 Models and patterns, not including paper patterns.	4	16	5	.....	.....	.....	11	11	.....	.....	9	9	.....	.....	.....	24
13 Printing and publishing.	32	513	25	33	99	31	325	264	50	11	342	278	53	11	.....	410
14 Tobacco manufactures.	30	369	41	3	13	4	308	236	67	5	318	244	69	4	.....	.....
15 All other industries ¹ .	109	3,530	70	155	344	111	2,891	2,420	448	23	2,990	2,504	493	17	0	8,355

¹ All other industries embrace: Agricultural implements, 1; artificial stone, 2; awnings, tents, and sails, 2; baking powders and yeast, 2; bluing, 1; boxes, cigar, 2; boxes, fancy and paper, 1; brass and bronze products, 2; brooms, 2; butter, cheese, and condensed milk, 1; buttons, 1; canning and preserving, 2; carpets, rag, 5; cars and general shop construction and repairs by steam-railroad companies, 2; cars and general shop construction and repairs by street-railroad companies, 1; charcoal, 1; clothing, men's, including shirts, 3; clothing, women's, 1; coffee and spice, roasting and grinding, 1; coffins, burial cases, and undertakers' goods, 1; confectionery, 5; cordage and twine and jute and linen goods, 1; cutlery and tools, not elsewhere specified, 3; dyeing and finishing textiles, 1; electrical machinery, apparatus, and supplies, 2; electroplating, 1; flags, banners, regalia, society badges, and emblems, 1; flavoring extracts, 1; food preparations, 4; furnishing goods, men's, 1; furniture and refrigerators, 3; gas and

STATISTICS OF MANUFACTURES.

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TOTALS FOR ALL INDUSTRIES IN CITIES OF 10,000 BUT LESS THAN 50,000 INHABITANTS: 1909—Continued.

CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.

CHICAGO—Continued.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.	
	Total.	Services.			Materials.		Miscellaneous.						
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.			
64	\$361,820	\$528,395	\$22,883	\$24,388	\$226,834	\$11,122	\$150,211	\$29,962	\$839	\$300	\$61,856	\$686,538	\$525,265
65	502,446	492,618	36,041	20,842	198,872	8,619	163,245	18,380	2,158	72	44,389	614,307	442,443
66	17,335,144	9,909,001	387,874	424,389	3,034,442	77,820	4,770,031	65,890	65,940	14,144	1,068,471	11,487,464	6,639,613
67	13,830,299	16,580,211	555,593	1,031,417	995,733	129,536	11,715,496	58,945	67,540	6,144	2,019,807	18,942,448	7,097,416
68	1,366,605	2,548,480	137,041	152,713	409,922	27,181	1,365,658	67,473	44,199	70,577	2,019,807	2,830,754	1,437,915
69	5,376,754	8,716,806	525,917	985,836	631,706	49,779	3,166,260	167,865	30,998	69,740	3,088,705	10,359,984	7,143,945
70	708,289	642,709	54,005	27,006	156,562	6,402	311,382	9,128	3,919	500	73,807	739,857	422,073
71	901,851	1,887,283	161,552	178,971	848,224	25,250	396,593	61,995	5,093	24,060	185,685	2,156,055	1,734,212
72	47,982,013	63,080,450	4,105,807	6,619,033	15,077,167	648,615	20,606,956	1,479,378	207,929	4,461,763	10,459,802	74,210,809	52,955,238
73	93,795	155,119	22,376	6,312	38,292	2,162	69,784	5,630	286	-----	10,287	179,041	107,105
74	251,977	323,529	15,900	11,970	52,875	5,448	194,528	12,517	482	-----	29,829	381,363	181,337
75	1,853,412	332,541	10,700	7,348	173,502	18,807	88,873	2,264	11,828	288	18,871	359,033	251,293
76	115,311,628	314,771,683	844,656	4,690,317	11,984,833	1,248,511	284,001,894	150,745	489,809	229,196	11,131,859	325,081,637	39,811,282
77	816,079	2,405,526	39,650	31,544	63,277	2,498	2,119,200	6,623	1,772	-----	25,541	2,573,769	336,656
78	11,473,794	18,621,802	203,094	1,129,894	1,035,233	258,327	13,529,132	27,320	48,952	19,468	2,370,382	19,939,041	6,151,582
79	156,862	355,509	20,369	21,375	61,942	5,130	188,452	9,835	343	29,717	18,406	407,890	214,308
80	777,366	1,158,673	106,926	79,798	472,376	26,593	289,535	50,933	2,122	4,784	124,251	1,282,282	966,364
81	2,545,769	2,663,609	126,292	145,495	725,632	28,929	1,127,737	26,833	14,614	8,150	469,927	3,182,745	2,026,079
82	1,658,164	1,843,072	83,031	288,851	279,012	13,801	902,736	23,215	4,677	1,150	246,599	2,074,528	1,157,991
83	10,331,461	14,010,348	215,765	501,065	2,784,763	49,577	6,672,129	174,336	1,935,886	2,508	1,674,319	16,632,515	9,910,809
84	1,852,184	1,188,289	100,690	100,690	302,566	12,926	362,459	46,793	3,754	5,662	1,247,937	253,023	872,532
85	326,870,538	200,086,816	5,200,020	5,944,092	28,399,469	17,484,179	125,107,197	1,958,736	1,941,208	268,164	13,793,751	234,103,550	91,512,174

and instrument cases, 5; kaolin and ground earths, 2; labels and tags, 12; lard, refined, not made in slaughtering and meat-packing establishments, 1; lasts, 2; lead, bar, pipe, and sheet, 2; lime, 2; liquors, distilled, 2; looking-glass and picture frames, 81; malt, 9; millinery and lace goods, 100; millstones, 1; mineral and soda waters, 63; mirrors, 9; moving pictures, 3; muclage and paste, 5; oil, linseed, 5; oil, not elsewhere specified, 11; oleomargarine, 3; optical goods, 7; paper and wood pulp, 2; paper patterns, 2; paving materials, 4; peanuts, grading, roasting, cleaning, and shelling, 1; pens, fountain, stylographic, and gold, 6; phonographs and graphophones, 1; pipes, tobacco, 2; pottery, terra-cotta, and fire-clay products, 12; roofing materials, 8; rules, ivory and wood, 1; sales and vaults, 2; sand and emery paper and cloth, 1; saws, 7; scales and balances, 9; screws, machine, 2; screws, wood, 2; sewing machines, cases, and attachments, 4; show cases, 14; signs and advertising novelties, 43; silk and silk goods, including throwsters, 2; smelting and refining, lead, 2; soda-water apparatus, 5; sporting and athletic goods, 20; springs, steel, car and carriage, 4; stationary goods, not elsewhere specified, 18; statuary and art goods, 12; sugar and molasses, 1; sulphuric, nitric, and mixed acids, 1; tin foil, 2; toys and games, 17; typewriters and supplies, 8; umbrellas and canes, 2; upholstering materials, 9; vault lights and ventilators, 5; vinegar and cider, 2; wall paper, 4; wall plaster, 2; washing machines and clothes wringers, 7; waste, 2; whips, 2; windmills, 1; window shades and fixtures, 35; wirework, including wire rope and cable, 33; wood, turned and carved, 37; wool pulling, 10; wool scouring, 3; woolen, worsted, and felt goods, and wool hats, 4.

EAST ST. LOUIS.

1	\$31,297,548	\$16,701,465	\$338,170	\$352,379	\$3,250,104	\$526,644	\$10,913,432	\$33,626	\$176,436	\$2,470	\$1,108,204	\$18,227,960	\$6,787,884
2	128,352	279,716	5,980	18,572	52,999	6,099	171,050	8,064	706	-----	16,246	336,176	159,027
3	54,972	42,575	1,040	520	14,954	933	22,864	700	313	-----	56,041	32,244	32,244
4	52,680	157,843	-----	988	66,262	722	81,618	1,972	306	-----	5,975	183,350	101,010
5	2,031,248	1,750,212	70,709	37,078	512,587	78,190	974,575	3,460	5,680	-----	67,933	1,871,563	818,798
6	405,001	313,363	8,139	10,681	62,179	4,314	207,481	200	754	-----	19,615	327,760	115,965
7	147,500	93,256	10,192	6,949	38,217	1,251	25,278	4,600	687	2,470	3,612	105,290	78,761
8	19,242	26,552	-----	9,144	28	28	12,034	754	3,028	-----	1,564	39,793	27,701
9	28,458,553	14,037,948	242,110	277,591	2,493,762	435,107	9,418,532	13,876	164,962	-----	992,008	15,308,017	5,454,378

rolling mills, 2; iron and steel forgings, 2; kaolin and ground earths, 1; leather goods, 1; liquors, malt, 3; marble and stone work, 3; mattresses and spring beds, 1; mineral and soda waters, 3; paint and varnish, 4; paper and wood pulp, 1; patent medicines and compounds and druggists' preparations, 2; roofing materials, 1; slaughtering and meat packing, 1; springs, steel, car and carriage, 1; surgical appliances and artificial limbs, 1; wirework, including wire rope and cable, 1.

PROBIA.

1	\$24,945,147	\$59,091,889	\$719,862	\$611,012	\$3,551,905	\$551,233	\$17,221,973	\$91,942	\$34,831,328	\$39,287	\$1,473,347	\$63,061,155	\$45,287,949
2	288,736	640,591	10,840	11,194	103,840	12,914	468,754	8,607	1,341	1	23,100	763,789	282,121
3	106,144	124,887	2,400	2,008	41,174	1,925	66,709	3,136	303	-----	7,232	140,825	72,191
4	934,737	1,096,729	39,396	10,696	172,243	16,703	823,261	1,160	1,129	-----	32,141	1,152,842	312,878
5	414,619	652,365	22,622	10,050	129,834	3,611	449,103	4,992	2,329	860	28,964	684,351	231,637
6	199,029	741,999	535	7,993	22,352	5,411	634,257	-----	1,111	100	70,240	759,334	119,666
7	915,052	961,360	55,953	19,053	315,166	16,419	498,590	5,812	2,566	4,000	43,801	1,081,520	566,511
8	29,997	61,845	960	5,080	23,629	313	20,968	1,950	306	-----	72,275	50,994	50,994
9	5,959,380	42,983,697	94,758	54,630	380,451	184,723	7,293,689	601	34,558,162	24,235	382,448	44,570,013	37,091,601
10	2,211,181	728,139	69,200	12,265	142,902	23,042	175,564	-----	162,864	-----	140,302	1,101,015	902,409
11	366,076	351,198	16,338	3,909	120,489	2,862	181,183	2,480	2,091	-----	21,841	398,270	214,220
12	14,905	13,021	-----	-----	8,650	652	1,699	1,200	67	-----	753	20,915	18,564
13	606,138	690,175	74,494	92,934	208,769	13,649	207,060	14,067	1,640	10,091	66,571	881,477	660,788
14	272,890	545,687	6,595	7,968	203,985	735	233,983	3,340	54,668	-----	29,413	646,691	406,973
15	12,626,263	9,502,196	325,771	373,232	1,678,430	268,274	6,162,145	43,697	42,751	-----	607,893	10,787,833	4,357,416

electric fixtures and lamps and reflectors, 2; gas, illuminating and heating, 1; grease and tallow, 2; hand stamps and stencils and brands, 1; ice, manufactured, 2; jewelry, 3; liquors, vinous, 1; malt, 2; marble and stone work, 5; mattresses and spring beds, 1; mineral and soda waters, 7; muclage and paste, 1; paint and varnish, 1; paper and wood pulp, 2; paper goods, not elsewhere specified, 1; patent medicines and compounds and druggists' preparations, 7; photo-engraving, 1; scales and balances, 1; slaughtering and meat packing, 3; soap, 1; soda-water apparatus, 1; stoves and furnaces, including gas and oil stoves, 3; surgical appliances and artificial limbs, 1; wall plaster, 1; wirework, including wire rope and cable, 1.

TABLE III.—DETAIL STATEMENT FOR CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES, AND CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.
SPRINGFIELD.

INDUSTRY AND CITY.	Number of establishments	PERSONS ENGAGED IN INDUSTRY.										WAGE EARNERS—NUMBER DEC. 15, OR NEAREST REPRESENTATIVE DAY.					Primary horse-power.
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks.		Wage earners (average number).			Total.	16 and over.		Under 16.				
					Male.	Female.	Total.	16 and over.			Under 16.	Male.	Female.	Male.	Female.		
								Male.	Female.								
1 All Industries.....	171	4,355	174	134	292	103	3,652	2,020	688	44	3,737	2,091	700	40	6	6,348	
2 Bread and other bakery products.....	16	88	22	2	3	0	55	54	1	.....	56	55	1	.....	.....	79
3 Carriages and wagons and materials.....	7	70	10	4	.....	2	54	54	.....	.....	50	50	.....	.....	.....	80
4 Copper, tin, and sheet-iron products.....	10	77	11	3	1	2	60	60	.....	.....	59	59	.....	.....	.....	32
5 Foundry and machine-shop products.....	10	270	14	10	17	3	221	214	.....	7	238	230	.....	8	.....	784
6 Lumber and timber products.....	7	176	10	9	7	3	147	141	5	1	154	148	5	1	.....	312
7 Marble and stone work.....	5	36	4	2	3	1	26	26	.....	.....	22	22	.....	.....	.....	20
8 Printing and publishing.....	27	549	20	34	135	39	321	273	45	3	353	300	50	3	.....	257
9 Tobacco manufactures.....	30	157	31	2	.....	2	122	103	10	0	130	110	11	9	.....	70
10 All other industries ¹	50	2,932	52	68	124	42	2,546	1,095	627	24	2,075	2,017	633	19	6	4,744	

¹ All other industries embrace: Agricultural implements, 3; artificial stone, 4; automobiles, including bodies and parts, 1; awnings, tents, and sails, 2; boots and shoes, including cut stock and findings, 1; brick and tile, 1; brooms, 1; brushes, 1; canning and preserving, 1; carpets, rag, 1; cars and general shop construction and repairs by steam-railroad companies, 2; cars and general shop construction and repairs by street-railroad companies, 1; clocks and watches, including cases and materials, 4; confectionery, 4; cutlery and tools, not elsewhere specified, 1; electrical machinery, apparatus, and supplies, 1; flour-mill and gristmill products, 1; food preparations, 2;

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

1 ALTON.....	69	2,720	45	79	112	64	2,429	2,247	124	58	2,818	2,000	145	07	.....	5,483
2 AURORA.....	165	5,884	165	130	372	122	5,095	4,081	943	71	5,331	4,273	984	41	33	7,906
3 BELLEVILLE.....	119	2,248	107	103	134	32	1,872	1,602	189	71	1,937	1,721	143	08	5	4,541
4 BLOOMINGTON.....	107	2,495	99	97	163	59	2,077	1,797	266	44	2,220	1,890	283	22	25	2,877
5 CAIRO.....	50	1,444	51	50	69	31	1,237	1,202	32	3	1,337	1,200	35	3	.....	4,764
6 CANTON.....	33	1,421	39	13	80	27	1,262	1,143	111	8	1,598	1,448	141	9	.....	3,716
7 CHAMPAIGN.....	42	381	44	18	33	13	273	253	14	6	288	267	15	0	.....	478
8 CHICAGO HEIGHTS.....	79	4,444	60	111	248	72	3,953	3,830	95	28	4,387	4,222	103	29	3	10,176
9 CICERO.....	7	735	2	20	42	4	658	658	.....	.....	597	597	.....	.....	.....	1,680
10 DANVILLE.....	76	2,044	76	80	108	36	1,744	1,605	127	12	2,003	1,893	151	11	3	3,258
11 DECATUR.....	157	3,447	148	163	310	127	2,690	2,213	402	84	2,802	2,371	432	07	22	6,447
12 ELGIN.....	115	6,583	100	104	192	93	6,094	3,044	2,352	98	6,337	3,790	2,447	46	54	6,059
13 EVANSTON.....	60	1,040	63	19	88	33	837	754	32	1	839	759	32	1	.....	1,056
14 FREEPORT.....	69	3,225	56	82	140	85	2,853	2,585	245	23	3,108	2,808	275	23	2	4,412
15 GALESBURG.....	62	1,738	58	74	110	31	1,465	1,206	186	13	1,505	1,379	202	2	12	1,968
16 JACKSONVILLE.....	57	1,096	58	27	49	15	947	700	234	13	931	725	242	8	6	1,189
17 JOLIET.....	137	7,266	128	138	481	136	6,383	5,834	523	26	6,942	6,346	571	8	17	37,744
18 KANKAKEE.....	55	1,552	60	38	84	21	1,349	1,038	63	.....	1,455	1,012	375	22	46	3,688
19 LA SALLE.....	20	1,430	24	32	79	11	1,203	1,200	0	13	1,350	1,330	10	19	.....	3,785
20 LINCOLN.....	40	308	49	15	19	5	220	204	15	1	240	228	17	1	.....	385
21 MATTOON.....	35	1,102	30	21	79	15	945	916	32	.....	1,013	979	34	.....	.....	1,019
22 MOLINE.....	66	6,106	44	142	372	99	5,440	5,225	180	44	5,777	5,540	190	40	1	10,239
23 OAK PARK.....	23	362	21	0	36	14	282	276	0	.....	285	250	5	.....	.....	718
24 QUINCY.....	235	5,056	201	213	440	170	4,032	3,242	730	60	4,159	3,345	752	42	20	7,557
25 ROCK ISLAND.....	74	2,179	51	111	198	65	1,754	1,596	112	40	2,058	1,872	132	54	.....	3,173
26 ROCKFORD.....	205	10,523	208	278	456	272	9,309	7,915	1,499	105	9,910	8,107	1,591	113	99	10,217
27 STREATOR.....	45	1,409	44	33	84	23	1,275	1,109	108	58	1,588	1,382	134	79	2	3,140
28 WAUKESHA.....	59	3,773	146	121	320	99	3,090	2,790	281	19	3,543	3,109	322	15	7	23,144

STATISTICS OF MANUFACTURES.

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TOTALS FOR ALL INDUSTRIES IN CITIES OF 10,000 BUT LESS THAN 50,000 INHABITANTS: 1909—Continued.

CITIES OF 50,000 INHABITANTS OR MORE, BY INDUSTRIES—Continued.

SPRINGFIELD.

Capital.	EXPENSES.										Value of products.	Value added by manufacture.
	Total.	Services.			Materials.		Miscellaneous.					
		Officials.	Clerks.	Wage earners.	Fuel and rent of power.	Other.	Rent of factory.	Taxes, including internal revenue.	Contract work.	Other.		
1 \$7,174,014	\$7,548,771	\$227,730	\$237,982	\$2,065,552	\$146,986	\$4,057,121	\$39,895	\$112,280	\$36,351	\$594,874	\$8,497,245	\$4,293,138
2 124,291	245,593	3,000	4,413	43,444	4,665	177,308	2,310	889	.....	9,564	309,092	127,719
3 100,221	85,740	3,903	190	34,518	1,717	39,657	3,100	537	.....	2,118	98,478	57,104
4 79,059	141,922	3,244	1,343	35,916	1,112	89,285	2,248	278	.....	471	178,129	87,732
5 647,337	471,340	13,728	13,798	134,781	14,515	240,223	3,049	2,938	.....	775	452,383	227,645
6 219,924	225,688	7,956	5,823	89,048	2,251	108,079	500	939	.....	11,092	242,213	131,883
7 95,717	89,936	3,600	6,117	20,009	1,050	50,688	1,175	273	.....	3,448	119,007	67,269
8 583,708	694,038	44,674	88,209	202,737	10,769	151,829	12,504	2,387	.....	29,260	738,955	576,357
9 53,911	171,468	2,920	1,140	61,129	741	71,995	3,293	17,916	.....	12,334	206,158	133,422
10 5,269,848	5,452,487	144,705	116,949	1,470,970	110,166	3,128,057	11,716	86,023	.....	2,319	6,122,230	2,884,007

furnishing goods, men's, 1; gas and electric fixtures and lamps and reflectors, 2; gas, illuminating and heating, 1; hair work, 1; ice, manufactured, 3; leather goods, 5; liquors, malt, 1; mattresses and spring beds, 1; mineral and soda waters, 3; optical goods, 1; paint and varnish, 1; patent medicines and compounds and druggists' preparations, 2; shoddy, 1; slaughtering and meat packing, 2; wall plaster, 1.

CITIES OF 10,000 TO 50,000 INHABITANTS—ALL INDUSTRIES COMBINED.

1 \$5,585,240	\$9,618,321	\$182,721	\$135,905	\$1,527,958	\$209,223	\$7,053,039	\$14,802	\$43,275	\$10,321	\$461,077	\$10,096,333	\$2,834,071
2 11,427,258	10,255,526	250,227	471,296	2,936,486	258,816	5,321,615	34,191	87,518	19,886	875,491	10,954,175	5,373,744
3 5,541,452	4,180,387	171,026	123,640	1,062,160	89,063	2,235,262	9,655	111,885	7,429	369,367	4,614,698	2,290,373
4 4,761,817	4,365,961	148,961	176,481	1,186,253	110,871	2,416,247	23,326	26,707	10,306	256,809	4,867,930	2,340,812
5 4,883,881	4,099,193	96,294	82,924	628,429	52,814	2,903,733	49,380	30,862	130	255,627	4,440,148	1,483,601
6 8,189,392	2,443,161	27,905	100,944	691,543	41,795	1,141,600	4,747	35,613	460	398,554	2,941,625	1,758,230
7 894,734	720,692	21,850	30,148	174,472	33,405	385,938	7,919	6,507	.....	60,453	846,489	427,146
8 10,420,527	9,475,197	311,971	293,651	2,471,087	321,783	5,289,636	39,685	34,724	3,419	709,241	10,839,268	5,227,849
9 2,496,100	1,405,638	53,729	43,365	406,154	82,961	649,918	1,600	17,069	4,706	144,236	1,461,164	728,285
10 2,656,033	3,022,789	117,200	118,973	1,077,341	86,737	1,343,135	19,547	42,260	3,863	212,733	3,350,596	1,920,724
11 6,579,494	8,628,270	270,503	338,317	1,419,925	103,822	5,813,733	42,329	58,038	5,511	576,092	9,787,988	3,850,433
12 16,078,632	9,430,657	275,800	215,014	3,379,222	178,300	4,360,011	26,974	128,884	2,000	864,452	11,119,570	6,681,359
13 4,241,198	3,329,854	44,738	133,012	589,557	141,570	2,208,510	10,886	12,398	37,705	151,478	3,778,298	1,428,218
14 6,402,838	6,881,443	135,688	170,851	1,870,371	123,260	4,234,150	12,357	53,406	1,293	520,097	7,811,277	3,393,867
15 2,454,346	2,721,546	94,574	106,574	887,130	92,271	1,324,059	13,175	13,708	3,069	186,986	2,919,091	1,502,761
16 1,502,781	2,036,443	40,871	42,766	487,125	46,409	1,260,792	8,109	34,842	9,227	106,302	2,288,700	991,499
17 25,586,161	34,908,578	319,979	610,184	4,436,478	6,508,486	21,249,684	21,055	239,907	74,721	1,449,084	38,816,523	11,058,553
18 2,599,115	2,516,106	64,432	40,886	621,993	69,288	1,424,036	7,138	43,888	1,980	242,525	2,723,171	1,229,847
19 4,392,559	4,360,118	148,101	176,379	856,199	518,332	2,409,397	3,844	21,344	.....	226,622	5,307,551	2,379,622
20 611,472	483,406	17,334	14,286	116,214	19,806	269,869	5,820	6,541	.....	34,596	570,243	280,568
21 831,933	1,380,872	25,823	67,741	561,480	39,829	628,620	3,756	5,800	1,404	46,419	1,434,420	765,971
22 26,333,647	17,412,615	433,879	453,983	3,522,729	243,371	10,945,928	25,913	69,288	15,168	1,702,276	20,891,668	9,702,369
23 6,060,795	734,654	23,247	33,762	196,602	219,106	171,781	3,886	14,965	.....	51,977	1,117,697	726,610
24 11,906,181	10,257,065	311,541	308,319	2,082,998	249,450	5,542,635	63,713	203,693	57,508	1,377,308	11,435,572	5,643,487
25 9,287,204	4,718,891	184,904	181,212	1,025,755	107,913	2,708,728	11,337	108,838	870	388,334	5,386,776	2,569,135
26 22,411,997	19,347,702	550,836	579,982	5,213,365	376,493	10,206,279	64,280	108,238	37,744	2,211,435	22,265,740	11,683,968
27 4,587,764	1,876,160	63,613	39,652	643,563	195,807	621,247	7,608	18,558	1,000	285,102	2,137,252	1,320,198
28 17,091,961	18,103,066	232,961	363,344	2,102,504	721,338	13,442,924	157,503	67,286	8,570	1,016,636	19,984,082	5,819,820

CHAPTER 5.

MINES AND QUARRIES.

Introduction.—The present chapter contains a complete statement of the statistics of all mining industries, which include all mines, quarries, and wells, in the state of Illinois for the year 1909, as shown by the Thirteenth Census.

A brief explanation of the scope of the census of mining industries and of the terms used, in so far as the usage differs from that followed in the census of manufactures, is presented below in order to prevent any misinterpretation of the statistics.

The explanations here given show the usage of the mining census generally, though some of the special rules have obviously no relation to particular states in which the industries referred to do not exist.

Scope of census.—The Thirteenth Census covered all classes of mines, quarries, and petroleum and gas wells that were in operation during any portion of the year 1909, both those which were producing and those whose operations were confined to development work. Mines, quarries, or wells that were idle during the entire year 1909 were omitted from the canvass. The following operations were likewise omitted from the canvass: Prospecting; the digging or dredging of sand and gravel for the construction of roads and for building operations; the production of mineral waters; and the operation of small bituminous coal banks producing less than 1,000 tons annually. Where the mineral products are not marketed in their crude condition, but are dressed or washed at the mine or quarry, the statistics of mining cover the entire work of obtaining the crude material and its preparation for the market.

Period covered.—The returns cover the calendar year 1909, or the business year which corresponds most nearly to that calendar year. The statistics cover a year's operations, except for enterprises which began or discontinued business during the year.

Number of operators.—As a rule, the unit of enumeration was the "operator." Every individual, firm, or corporation was required to furnish one report for all mines, quarries, or wells which were operated under the same management or for which one set of books of account was kept. Separate reports were obtained for all properties operated in different states, even where they were owned by the same operator. Likewise, where the operations of one individual, firm, or corporation covered more than one class of mines and quarries, such as coal, iron, limestone, etc., a separate report was received for each industry.

Number of mines, quarries, and wells.—This figure represents the total number of mines and quarries in operation or in the course of development at any time during the calendar year 1909, or the business year that corresponds most nearly to that calendar year, and the number of completed petroleum and natural-gas wells in operation on December 31, 1909.

In most mining and quarrying industries the number of mines or quarries varies but little from the number of operators.

Expenses of operation and development.—A certain amount of development work is incidental to the operation of every mine. The expenses reported for producing mines include the cost both of operation and of development work which was done in connection with operation.

Wages.—The amount shown as wages includes only the compensation of regular wage earners hired by the day, week, or month, or under the piecework system.

Supplies and materials.—This item includes the cost of lumber and timber used for repairs, mine supports, track ties, etc.; iron and steel for blacksmithing; rails, frogs, sleepers, etc., for tracks and repairs; renewals of tools and machinery and materials for repairs; and supplies, explosives, oil, etc., as well as the cost of fuel and the rent of power. The schedule called only for the cost of such supplies and materials as had been used during the year covered by the report. Accurate figures, however, could be furnished only in those cases where the operators kept an account of supplies and materials used, or had an inventory made of all in stock at the beginning and at the end of the year. Such a system of accounting is far from general among mine operators, and there is reason to believe that in many cases the reported cost of supplies and materials covered all purchased during the year rather than those used during the year. The crude product of some operators was purchased by others for further dressing or refining; the cost of such materials is shown separately in the general table.

Capital.—The census schedule required every operator to state the total amount of capital invested in the enterprise on the last day of the business year reported, as shown by his books. There is, however, a great diversity in the methods of bookkeeping in use by different operators. As a result, the statistics for capital lack uniformity. Some of the figures reported apparently represent capital stock at face value; others include large investments in mineral lands which are not at present being actively mined, but are held in reserve; still others may include expenditures for unproductive mining ventures in no way related to the operations carried on during the census year.

Persons engaged in mining industries.—The statistics of the number of operators and officials, clerks, and wage earners, are based on the returns for December 15, or the nearest representative day. The reported number of wage earners includes overseers and foremen performing work similar to that of the men over whom they have charge; those whose duties are wholly supervisory are classed as superintendents and managers. Because of the common practice of shutting down mines at frequent intervals, it is impossible to ascertain with any satisfactory degree of accuracy the average number of employees—that is, the number who, if continuously employed, would be required to produce the actual output of the year.

Value of products.—Statistics of the value of mineral products were obtained by the Bureau of the Census in cooperation with the United States Geological Survey, but the two bureaus follow different methods in presenting these statistics. The Geological Survey shows separately the value of each mineral product, whereas the Bureau of the Census presents the value of products of each mining industry. The value of products given for a mining industry often includes the value of some products not covered by the industry designation. The crude product of metalliferous mines may include varying combinations of metals, such as gold, silver, copper, lead, zinc, and iron. Similarly, the total value of all products of the granite quarries is not identical with the value of the total output of granite, but may include the value of some marble or other stone quarried in connection with the principal product.

The value of products for 1909 in most cases represents the value of the products marketed during that year, not the value of those mined during that year.

MINING IN ILLINOIS.

Summary.—Statistics for all mining enterprises in the state of Illinois are presented in Table 7, which gives statistics for all industries combined and for producing enterprises separately in all cases where the statistics could be given without disclosing the operations of an individual enterprise. Statistics for nonproducing enterprises are also given separately from producing enterprises.

Illinois ranked second among the states in the value of the products of mining industries in 1909, Pennsylvania being the only state to report products of greater value. The gross value of the products for the state was \$76,658,974. Deducting from this amount, \$101,980, the value of the lead and zinc ore and natural gas sold by some operators and used as materials or resold by others, leaves \$76,556,994 as the net value of the products. The principal industry was bituminous coal mining, which reported products valued at \$53,030,545. This figure represents 69.3 per cent of the total net value of the products of all mines, quarries, and wells. The value of the products of petroleum and natural gas wells, the industry second in importance, amounted to \$18,883,102.

For the five enterprises shown in the column "All other," in Table 7, the expenses of operation and development exceeded the value of the products. This was due in part to unprofitable mining ventures and in part to expenditures for development work resulting in permanent improvements to the mining properties.

Character of organization.—Table 1 classifies the producing mining operations of the state under form of organization, distinguishing corporations from individual owners and firms, while Table 2 gives further details for incorporated enterprises distinguished from those which are unincorporated.

INDUSTRY AND CHARACTER OF ORGANIZATION.	Number of operators.	Number of wage earners.	Value of products.		Per cent distribution.		
			Total.	Per operator.	Operators.	Wage earners.	Value of products.
All industries.	915	32,436	\$76,658,974	\$83,780	100.0	100.0	100.0
Individual.....	211	2,070	1,997,825	9,468	23.1	3.6	2.6
Firm.....	298	2,491	4,563,781	15,315	32.0	3.0	6.0
Corporation.....	391	76,030	68,440,973	175,041	42.7	93.0	89.3
Other.....	15	330	1,656,395	110,426	1.6	0.4	2.2
Bituminous coal.	470	74,445	53,030,545	112,831	100.0	100.0	100.0
Individual.....	133	2,578	1,481,485	11,139	23.3	3.5	2.8
Firm.....	91	1,925	1,127,484	12,390	19.4	2.0	2.1
Corporation.....	230	69,736	50,264,245	210,311	50.0	93.7	94.8
Other.....	7	206	167,331	22,476	1.5	0.3	0.3
Petroleum and natural gas.	323	4,059	18,883,815	58,501	100.0	100.0	100.0
Individual.....	38	98	360,692	9,492	11.8	2.4	1.9
Firm.....	180	360	3,326,717	17,602	58.5	8.0	17.6
Corporation.....	88	3,477	18,700,342	155,788	27.2	85.7	72.6
Other.....	8	124	1,400,064	187,383	2.5	3.1	7.9
Limestone.	81	3,276	3,977,359	49,103	100.0	100.0	100.0
Individual.....	26	172	108,984	4,192	32.1	5.3	2.7
Firm.....	11	130	69,219	6,293	13.6	4.0	1.7
Corporation.....	44	2,974	3,799,156	86,344	54.8	90.8	95.5

Out of a total of 915 operators, 391, or 42.7 per cent, were corporations. These corporations reported 89.3 per cent of the total value of products and employed 93 per cent of all wage earners.

	Incorporated.	Unincorporated.
Number of operators.....	391	524
Number of mines and quarries.....	449	316
Number of wells.....	8,407	2,511
Proprietors and firm members, total.....		1,425
Number performing manual labor.....		401
Salaried employees:		
Officers of corporations.....	373	
Superintendents and managers.....	705	140
Clerks and other salaried employees.....	1,228	87
Wage earners, Dec. 15, 1909, or nearest representative day.....	76,636	5,800
Capital.....	\$107,007,809	\$9,891,866
Expenses of operation and development:		
Salaries.....	62,366,696	6,351,425
Officers of corporations.....	909,641	
Superintendents and managers.....	1,019,899	128,662
Clerks and other salaried employees.....	1,008,566	46,047
Wages.....	45,798,689	2,580,038
Royalties and rent of mines.....	2,625,140	954,332
Taxes.....	256,720	20,740
Supplies and miscellaneous expenses.....	12,646,121	2,611,706
Cost of ore purchased and natural gas purchased and resold.....	101,980	
Value of products.....	68,440,973	8,218,001

Size of enterprises.—In Table 3 the producing mining enterprises of the state are classified according to the number of wage earners employed per enterprise or operating unit. Of the 82,436 wage earners reported by all enterprises, 29,297, or 35.5 per cent, were employed in the 29 enterprises employing over 500 wage earners each.

INDUSTRY AND WAGE EARNERS PER ENTERPRISE.	Enterprises.		Wage earners.	
	Number.	Per cent distribution.	Number.	Per cent distribution.
All industries.....	986	100.0	82,436	100.0
No wage earners.....	11	1.1		
Contract work and part-time employees.....	54	5.5		
1 to 5.....	310	31.4	650	0.8
6 to 20.....	231	23.4	2,591	3.1
21 to 50.....	102	10.3	3,492	4.2
51 to 100.....	73	7.4	5,337	6.5
101 to 500.....	176	17.8	41,069	49.8
501 to 1,000.....	21	2.1	14,190	17.2
Over 1,000.....	8	0.8	15,107	18.3
Bituminous coal.....	541	100.0	74,445	100.0
No wage earners.....	2	0.4		
Contract work.....	6	1.1		
1 to 5.....	58	10.7	268	0.3
6 to 20.....	153	28.3	1,674	2.2
21 to 50.....	73	13.5	2,505	3.4
51 to 100.....	55	10.2	4,069	5.4
101 to 500.....	166	30.7	39,087	52.5
501 to 1,000.....	21	3.9	14,190	19.1
Over 1,000.....	7	1.3	12,777	17.2
Petroleum and natural gas.....	323	100.0	4,059	100.0
No wage earners.....	5	1.5		
Contract work and part-time employees.....	46	14.2		
1 to 5.....	219	67.8	337	8.3
6 to 20.....	37	11.5	423	10.4
21 to 50.....	7	2.2	263	6.5
51 to 100.....	6	1.9	430	10.6
Over 100.....	3	0.9	2,606	64.2
Limestone.....	81	100.0	3,276	100.0
No wage earners.....	2	2.5		
1 to 5.....	18	22.2	58	1.8
6 to 20.....	27	33.3	335	10.2
21 to 50.....	16	19.8	611	18.6
51 to 100.....	11	13.6	810	24.7
Over 100.....	7	8.6	1,582	47.7

Persons employed in mining.—Of the 86,389 persons engaged in producing mines in 1909, 82,436 were wage earners, 2,528 salaried employees, and 1,425 proprietors or firm members. Of the last class, 401 performed manual labor in or about the mines. Coal mining, the leading industry, employed 74,445, or 90.3 per cent of all wage earners.

Prevailing hours of labor.—In Table 4 all producing mines and quarries, except those employing no wage earners and those operated exclusively by contract work and part-time employees, have been classified according to the prevailing hours of labor per day in each enterprise or operating unit. Petroleum and natural gas wells are not included in this table, because the lack of regularity in the number of hours worked per day in a large number of enterprises rendered such classification impracticable. The table shows the percentage of the total number of enterprises falling in each group, and also a per cent distribution in which each enterprise has been given a weight according to the total number of wage earners employed December 15, 1909, or the nearest representative day. It should be borne in mind that this latter distribution does not show the exact proportion of the total number of employees working the specified number of hours per day, since, in some cases, a part of the employees worked a greater or less number of hours than those generally prevailing in the enterprise.

For all industries combined, in 95 per cent of the number of enterprises weighted according to the number of wage earners, the prevailing hours per day were eight or under. For bituminous coal mines the corresponding per cent was 99.9, while in the limestone quarries only 1.7 per cent of the enterprises were operated on this basis. In this industry a day of 10 hours prevailed in 87.7 per cent of the enterprises.

INDUSTRY AND HOURS PER DAY.	PRODUCING ENTERPRISES: 1909		
	Enterprises.		Per cent distribution of enterprises weighted according to number of wage earners.
	Number.	Per cent distribution.	
All industries ¹	649	100.0	100.0
8 hours and under.....	535	82.4	95.0
9 hours.....	25	3.9	0.5
10 hours.....	88	13.3	4.2
12 hours.....	3	0.5	0.3
Bituminous coal	533	100.0	100.0
8 hours and under.....	523	98.1	99.9
9 hours.....	4	0.8	0.1
10 hours.....	6	1.1	0.1
Limestone	79	100.0	100.0
8 hours.....	6	7.6	1.7
9 hours.....	10	12.7	5.6
10 hours.....	62	78.5	87.7
12 hours.....	1	1.3	4.9

¹ Exclusive of petroleum and natural gas.

Engines and power.—The aggregate horsepower employed in the producing enterprises, as shown by Table 5, was 225,330, all of which, with the exception

of 3,382 horsepower developed by electric motors operated by purchased current, was developed by engines owned by the enterprises using them.

CHARACTER OF POWER.	PRODUCING ENTERPRISES: 1909				
	Total.	Bituminous coal.	Petroleum and natural gas.	Limestone.	All other.
Primary power:					
Aggregate horsepower.....	225,330	166,174	40,615	16,342	2,199
Owned.....	221,948	165,925	40,615	13,209	2,199
Steam engines—					
Number.....	2,450	1,987	247	178	38
Horsepower.....	185,471	165,441	4,720	13,147	2,163
Gas or gasoline engines—					
Number.....	1,621	71	1,541	4	5
Horsepower.....	36,477	434	35,895	62	36
Electric motors operated by purchased current—					
Number.....	76	16	.....	60	.....
Horsepower.....	3,382	249	.....	3,133	.....
Electric motors run by current generated by enterprise using:					
Number.....	342	298	.....	34	10
Horsepower.....	14,667	12,165	.....	2,127	275

Comparison of mining industries: 1902-1909.—In order to make comparisons between 1909 and 1902 it is necessary to omit from the 1902 figures, as given in the mines and quarries report for that year, statistics for the production of cement and enterprises operated by governmental institutions; to omit from the 1909 figures, as they appear in other tables in this chapter, the value of the by-products of bituminous coal mines, and to add to the 1909 statistics, figures for the production of lime, which were omitted from the census of mines and quarries in 1909. Such items as are comparable for the two years are presented in Table 6.

The greatest relative increase in the value of products from 1902 to 1909 was in the value of petroleum and natural gas, which increased in the eight years from \$2,844 to \$18,895,815. Another important increase was in the value of bituminous coal from \$33,945,910 to \$52,999,918.

	PRODUCING ENTERPRISES.		
	1909	1902	Per cent of increase.
Wages and salaries.....	\$49,838,660	\$28,539,154	74.6
Supplies and materials.....	\$9,973,037	\$3,315,552	200.8
Royalties and rent of mines.....	\$3,579,960	\$474,475	654.5
Contract work.....	¹ \$2,360,424	\$25,018	8,973.0
Value of products.....	\$77,214,343	\$37,377,226	106.6
Primary horsepower.....	226,124	88,500	155.5

¹ Exclusive of the wages of part-time employees for the petroleum and natural gas industry, which are included under "Contract work," in Table 7.

Duplication between manufactures and mining.—In the production of limestone, peat, and sandstone some of the operators subjected the products obtained to certain manufacturing processes on the premises before marketing. These enterprises have been included in the statistics both for manufactures and for mining. As a result of this fact, the combined value of products for the manufacturing and mining industries in Illinois involves a duplication of \$577,428.

DETAILED STATISTICS FOR MINING INDUSTRIES: 1909.

Table 7

	Aggregate.	PRODUCING MINES, QUARRIES, AND WELLS.										Non-producing mines, quarries, and wells.
		Total.	Bituminous coal.	Petroleum and natural gas.	Lead and zinc.	Limestone.	Sandstone.	Clay (sold as such).	Infusorial earth.	All other. ¹		
Number of operators.....	024	015	470	323	4	81	8	14	10	5	8	
Number of mines, quarries, and wells.....	11,089	11,077	631	10,918	3	84	8	16	12	5	12	
Capital.....	\$117,469,953	\$110,969,707	\$60,426,029	\$34,360,518	\$183,800	\$3,011,628	\$58,775	\$305,037	\$33,900	\$49,950	\$510,246	
Expenses of operation and development.....	\$68,861,985	\$68,718,121	\$51,697,504	\$18,476,053	\$213,137	\$2,882,339	\$20,405	\$95,166	\$53,498	\$279,419	\$143,944	
Services—												
Salaried officers of corporations, superintendents, and managers.....	\$2,059,892	\$2,058,102	\$1,324,355	\$337,189	\$7,558	\$153,835	\$5,008	\$5,258	\$4,800	\$17,737	\$1,790	
Clerks and other salaried employees.....	\$1,054,553	\$1,054,553	\$769,313	\$99,109	\$1,800	\$69,332		\$1,450	\$120	\$4,441		
Wage earners.....	\$40,410,023	\$40,378,727	\$41,991,246	\$2,626,371	\$56,797	\$1,461,714	\$9,588	\$57,942	\$26,191	\$149,878	\$31,296	
Miscellaneous—												
Supplies.....	\$8,495,302	\$8,472,837	\$3,930,118	\$4,076,483	\$13,001	\$411,100	\$1,050	\$9,251	\$3,741	\$20,093	\$22,528	
Cost of ore purchased and natural gas purchased and resold.....	\$101,980	\$101,080		\$12,713	\$89,207							
Fuel and rent of power.....	\$1,327,904	\$1,325,880	\$1,005,253	\$38,752	\$20,887	\$221,733	\$303	\$5,923	\$9,140	\$23,859	\$2,024	
Royalties and rent of mines.....	\$3,579,553	\$3,579,472	\$744,800	\$2,776,048	\$10,973	\$34,607	\$3,019	\$3,000	\$235	\$963	\$81	
Taxes.....	\$287,041	\$287,460	\$171,582	\$72,107	\$232	\$21,702	\$80	\$490	\$253	\$963	\$81	
Contract work.....	\$2,443,378	\$2,376,950	\$51,450	\$2,302,051				\$6,125		\$96,422	\$96,422	
Rent of offices and other sundry expenses.....	\$3,101,000	\$3,082,154	\$1,710,297	\$1,135,010	\$6,502	\$508,380	\$1,348	\$5,007	\$9,878	\$82,458	\$10,545	
Value of products.....	\$76,658,974	\$76,658,974	\$53,030,545	\$18,895,815	\$292,453	\$3,977,359	\$30,360	\$108,921	\$59,200	\$264,321		
Persons engaged in industry.....	86,495	86,389	76,761	5,188	137	3,500	40	162	89	304	106	
Proprietors and officials.....	2,557	2,643	1,304	1,004	5	146	12	13	18	17	14	
Proprietors and firm members.....	1,430	1,426	628	817		51	9	6	19	1	11	
Number performing manual labor.....	401	403	359	22		12	3	4		1		
Salaried officers of corporations.....	373	373	241	44	1	41	2		1	8		
Superintendents and managers.....	848	846	595	143	4	54	1	7	4	8	3	
Clerks and other salaried employees.....	1,310	1,310	952	125		78		2	1	6		
Wage earners, Dec. 15, 1909, or nearest representative day.....	82,528	82,430	74,445	4,059	130	3,276	28	147	70	281	92	
Above ground.....	15,090	15,011	7,240	4,059	61	3,270	28	108	56	183	79	
Below ground.....	67,438	67,425	67,205		69			39	14	98	13	
Men 10 years of age and over.....	82,432	82,340	74,368	4,059	130	3,275	28	130	69	281	92	
Engineers, firemen, mechanics, etc.....	7,545	7,637	3,009	3,281	29	448	1	13	13	53	8	
Above ground.....	6,809	6,798	2,974	3,281	24	448	1	13	13	44	8	
Below ground.....	739	739	725		5					9		
Miners, miners' helpers, quarrymen, and stonecutters.....	50,040	50,019	53,503		62	2,130	25	103	42	145	27	
Above ground.....	2,369	2,342			10	2,130	25	81	31	58	14	
Below ground.....	53,009	53,677	53,503		52			22	11	89	13	
All other employees.....	18,841	18,784	17,160	778	39	688	2	14	14	83	57	
Above ground.....	5,022	5,865	4,262	778	27	688	2	14	11	83	57	
Below ground.....	12,919	12,919	12,904		12				3			
Boys under 10 years of age.....	90	90	77			1		17	1			
Number of wage earners employed on the 15th day of each month:												
January.....	74,004	74,080	69,370	3,680	117	1,415	16	107	50	228	5	
February.....	74,209	74,294	68,760	3,634	40	1,458	15	101	51	229	5	
March.....	73,722	73,717	67,560	3,625	20	2,080	10	90	48	251	5	
April.....	68,480	68,478	61,260	3,702	67	2,073	20	115	52	277	11	
May.....	68,128	68,113	60,852	3,740	60	3,054	34	112	51	162	15	
June.....	66,570	66,563	58,799	3,847	75	3,372	30	114	51	265	17	
July.....	67,503	67,440	59,937	3,870	81	3,359	37	123	49	275	63	
August.....	67,213	67,137	59,571	3,821	107	3,249	33	115	52	189	75	
September.....	72,105	72,004	64,177	3,602	114	3,624	50	135	59	210	101	
October.....	70,124	70,042	63,032	3,834	117	3,486	38	127	70	255	85	
November.....	78,080	78,000	70,074	3,863	117	3,486	38	127	70	255	85	
December.....	78,342	78,268	71,193	3,967	120	2,500	14	118	65	285	74	
Land controlled, acres.....	1,001,886	990,389	585,366	396,135	710	4,206	458	1,551	840	1,123	11,497	
Owned.....	449,069	441,832	424,739	10,513		3,481	208	1,138	200	1,003	2,237	
Held under lease.....	358,317	349,057	100,027	385,022	710	725	250	303	640	120	9,260	
Mineral and oil land.....	988,673	967,070	652,390	396,135	710	4,085	458	1,551	840	901	11,497	
Owned.....	414,452	412,215	395,905	10,513		3,300	208	1,138	200	781	2,237	
Held under lease.....	564,121	544,801	150,431	385,622	710	725	250	303	640	120	9,260	
Timber land.....	3,472	3,472	3,255							217		
Other land.....	29,841	29,841	29,715							5		
Primary horsepower.....	226,344	225,380	168,174	40,615	577	10,342	33	457	180	952	1,014	

¹ Includes operators as follows: Fluorspar, 4; pent, 1.

² Includes \$18,522,804 which could not be distributed among the several industries. Exclusive of capital which could not be distributed by states because it was reported in one lump sum by operators having mining investments in two or more states.

³ In some cases the same operator conducted two or more enterprises producing different kinds of products, all enterprises being managed through one central administrative office. The total office expenses were accordingly apportioned among the several industries in proportion to the total expenses of each and the estimated amounts of such administrative expenses were added to "Sundry expenses" for each industry. In the totals for all enterprises, however, the expenses appear under the proper headings. The amounts included in "Rent of offices and other sundry expenses" for individual industries and properly distributed in the total for all industries are as follows: Salaried officers of corporations, superintendents, and managers, \$202,242; clerks and other salaried employees, \$118,988; taxes, \$20,052; and contract work, \$10,700.

⁴ The following numbers of persons, which could not be distributed among the several industries, are included under the proper headings in the totals for all enterprises: Aggregate, 208; salaried officers of corporations, 35; superintendents and managers, 29; and clerks and other salaried employees, 144.

⁵ In the bituminous coal industry 73 boys were employed below ground, and in the clay industry, 17.